Truth in Gaming: Toward Consumer Protection in the Gambling Industry

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TRUTH IN GAMING: TOWARD CONSUMER PROTECTION IN THE GAMBLING INDUSTRY

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Gambling is a form of entertainment with an ingenious billing system.[1]

Were you wondering was the gamble worth the price.[2]

"Thanks a lot!" quips [the digitized voice of comedian Rodney] Dangerfield, when a gambler deposits a buck in the [slot] machine. "Your kids don't need college anyway!"[3]

I. INTRODUCTION

The United States, along with most of the world, is in the midst of an extraordinary expansion of legalized gambling, even though a vociferous minority argues that gambling should remain banned or

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1. Anthony Curtis, *Gambling—What Does It Cost?*, in AMERICAN CASINO GUIDE 6 (Steve Bourie ed., 2000).
2. JONI MITCHELL, *That Song About the Midway*, on CLOUDS (Warner Bros. Records 1969).
3. Tom Gorman, *Casinos Bet on High-Tech Slots to Improve Returns*, L.A. TIMES, Feb. 16, 2003, at A20.

sharply limited. This Article is an attempt to add a new dimension to the current debate on the legal status of gambling, to argue that the question should not be simply whether to ban or allow gambling, but also to ask what consumer protections and informational disclosures should be provided to gamblers. States have acquired an immense appetite for the revenues that legal gambling provides.[4] Casinos have developed sophisticated databases designed to help them lure regular gamblers.[5] No one, however, is protecting gamblers by mandating that they receive even the most basic price information about slot machine use, the most popular product they are buying.

To maximize the utility that they derive from their activities, gamblers should generally be able to determine the average costs of gambling. In that way, recreational gamblers could more accurately determine whether their possible winnings and the pleasure they gain from gambling justify the price. In addition, these gamblers could effectively comparison shop between gambling opportunities, choosing which casinos to patronize and which games to play.

On the other hand, recent research indicates that pathological gamblers often engage in defective gambling strategies, misjudging their inability to control random events and evaluate their losses.[6] This research indicates that the provision of accurate information about the true costs of gambling and the likelihood of losing may aid pathological and problem gamblers in their efforts to gain control over their gambling habits.[7] This Article proposes a new regulatory regime, "Truth in Gaming," designed to aid both recreational and problem gamblers alike, and based on the clear, accurate, and timely disclosure of the true costs of gambling.

Section II of this Article discusses the dramatic, recent expansion of gambling in the United States and how states have come to rely on gambling revenues. A huge part of this expansion has been the growing use of slot machines, as they have become the dominant form of casino gambling. Section III describes the scope and social costs of problem gambling, a growing challenge that accompanies the intro-

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4. Ronald J. Rychlak, *The Introduction of Casino Gambling: Public Policy and the Law*, 64 MISS. L.J. 291, 311-12 (1995).

5. Chet Barfield, *Being in Clubs Suits Them Fine: Gamblers Bet on Getting Gifts and Casinos Can Count on the Returns*, SAN DIEGO UNION-TRIB., Nov. 12, 2001, at B1.

6. Anthony D. Miyazaki et al., *Promoting and Countering Consumer Misconceptions of Random Events: The Case of Perceived Control and State-Sponsored Lotteries*, 20 J. PUB. POL'Y & MARKETING 254, 254 (2001) (noting that gamblers may choose to participate in casino games because they misperceive that "they have control over the random outcome of that game").

7. Francine Ferland et al., *Prevention of Problem Gambling: Modifying Misconceptions and Increasing Knowledge*, 18 J. GAMBLING STUD. 19, 20 (2002).

duction of new gambling opportunities. Slot machines appear to be among the most addictive forms of gambling, providing a fast, continuous, and non-threatening form of wagering. Even though states reap the financial windfall from excessive gambling, they do too little to provide treatment or aid to problem gamblers.

In Section IV, I lay the basis for my proposal requiring disclosure of the cost of gambling by discussing how to calculate the average cost of a wager. The true average cost of any wager is not the amount of the wager itself, but rather is the amount or percentage, on average, of the wager that is retained by the casino and not returned to the gambler. If expressed in terms of a percentage, the hold percentage for slot machines or house edge for table games, is the percentage of any bet that the gambler can expect on average to lose and the casino to retain. If expressed as a fixed sum, which I term the hold amount, it is the sum that, on average, the casino will retain and the gambler will lose given a bet of a particular amount.

Section V describes how this basic price information is almost impossible to discover with any specificity for most slot machines throughout the United States. While some states disclose price information for classes of slot machines in their casinos, they provide such data in a vague and outdated manner, making it less useful to the average gambler. Worse yet, most Indian casinos do not disclose the hold percentages or even the range of hold percentages of their machines.

Section VI describes how gamblers would make use of accurate price information. Recreational gamblers could use it for comparison shopping, to choose between casinos, between machines in a casino, or between different forms of gambling. Accurate price information is essential to an efficient market, allowing consumers to compare products and determine how best to spend their limited funds. Without this information, even non-problem gamblers may unwittingly take risks they would deem excessive if they knew the extent of those risks. Problem and pathological gamblers may also benefit from this form of informational remedy, as current research indicates that excessive gambling is accompanied by cognitive lapses—pathological gamblers tend to misunderstand the randomness of slot machines, misperceive the lack of control they have over machines, and systematically underestimate their losses.

I discuss the proper design of informational remedies in Section VII, drawing on the analysis of other attempts to inform consumers. Casinos could be required to display generalized warnings of the hazards of gambling, but a far more effective system would be to re-

quire the disclosure of information tailored to a specific slot machine or to a specific gambler. I propose two such disclosure requirements. First, slot machines should disclose their hold percentages and hold amounts through an interactive disclosure system that informs each gambler how much, on average, would be lost given a particular bet. As gamblers bet, a set of numbers on the slot machine would display the hold amount and hold percentage for the machine given the amount bet. Gamblers would, therefore, be able to discern how altering their gambling strategy changes the hold percentages and hold amounts of the machine. Secondly, gamblers should be given access to information about their own gambling winnings and losses contained in the casinos' extensive databases. They could get this information by gaining access to casinos' databases that track the wagers of anyone participating in the casinos' affinity clubs. Even more effective would be allowing gamblers to use a universal "smart card," a plastic card with a computer chip that would allow gamblers to track their wagers, winnings and losses, and hold percentages in all casinos that they patronize. In Section VIII, I discuss possible objections to my proposal, such as cost, complexity, and privacy issues.

II. THE RAPID EXPANSION OF LEGAL GAMBLING IN THE UNITED STATES

Legal gambling has expanded dramatically in the United States in the last twenty-five years.[8] In 1975, only one state, Nevada, allowed casino gambling.[9] The next year, it was joined by New Jersey.[10] Now nearly thirty states allow casino-style gambling.[11] In the last decade, the United States gambling market was the fastest growing in the world.[12] The rate of participation in gambling at casinos has risen steadily with its increased availability, rising from 9% of the U.S. population in a 1975 study, 26% in a 1998 study, and 27% in a 2002 study.[13]

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8. As I. Nelson Rose has noted, it is difficult to conceive of another area of the law in which so many states have completely reversed their position on whether a specific activity should be illegal in such a short time. I. NELSON ROSE, GAMBLING AND THE LAW 7 (1986).

9. ROGER DUNSTAN, CAL. RESEARCH BUREAU, GAMBLING IN CALIFORNIA (Jan. 1997), *available at* http://www.library.ca.gov/CRB/97/03/crb97003.html.

10. *Id.*

11. David R. Francis, *Costs vs. Benefits of Betting,* CHRISTIAN SCI. MONITOR, Jan. 21, 2003, at 16.

12. Richard C. Morais, *Casino Junkies: The Latest Gambling Wave Has Hooked Governments Throughout the U.S.,* FORBES, Apr. 29, 2002, at 66 (citing a comment by Simon Holliday, a partner at Britain's Global Betting & Gaming Consultants).

13. John W. Welte et al., *Gambling Participation in the U.S.—Results from a National Survey,* 18 J. GAMBLING STUD. 313, 335 (2002). This study cautions against comparing the results of the different studies, noting that they use differing methodologies. *Id.* at 315.

In other words, more than 50 million Americans are currently engaging in casino gambling each year.[14] The amount lost in casinos has also been increasing at a dramatic pace, growing "from $9 billion in 1991 to more than $40 billion in 2001" with nearly $13 billion lost in tribal casinos and more than $27 billion lost in casinos owned by corporations.[15] While the casino market is maturing, and may not have the frenetic growth of past years, it should still grow at a steady, albeit somewhat slower, pace.[16]

The accessibility of legal gambling will likely increase in the near future, with numerous states "considering expanding gambling licenses to staunch a flood of red ink."[17] For example, the legislature in Maryland, which has banned slot machines except for a few hundred located on the Eastern Shore, in 2002 considered a proposal to allow four state horse tracks to install 11,500 slot machines.[18] Although the proposal was rejected, the legislature voted to study slot machine gaming and consider new legislation in 2004.[19]

The vast increase in legal gambling can be attributed in part to the growing public acceptance of gambling as entertainment. Large publicly traded corporations have taken over the ownership of gambling establishments, removing the stigma of organized crime.[20] Legal gambling has grown so quickly that it is affecting life outside of the casinos.[21] After gambling was legalized in Mississippi, "[i]n some parts of the State the cost of living is on the rise, there are housing shortages, traffic problems have multiplied, drainage and sewage systems are strained, and social services are struggling to keep up with a growing homeless population."[22]

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14. *See* HARRAH'S SURVEY 2003 PROFILE OF THE AMERICAN CASINO GAMBLER 13, *available at* http://www.harrahs.com/about_us/survey/030948_Survey.pdf (last visited Jan. 2, 2004) (noting that 51.2 million adults gambled in a casino in the last twelve months).

15. THOMAS A. GARRETT, CASINO GAMBLING IN AMERICA AND ITS ECONOMIC IMPACTS 4 (Aug. 2003), *available at* http://www.stls.frb.org/community/assets/pdf/CasinoGambling.pdf (last visited Jan. 2, 2004).

16. Christiansen Capital Advisors, LLC, *The Gross Annual Wager of the United States 2002*, *available at* http://www.cca-i.com (last visited Mar. 5, 2004).

17. Francis, *supra* note 11, at 16.

18. JEFFREY C. HOOKE & THOMAS A. FIREY, MARYLAND PUBLIC POLICY INSTITUTE, LEGALIZING VIDEO SLOT GAMING IN MARYLAND: A BUSINESS ANALYSIS 3 (2003), *available at* http://www.mdpolicy.org/research/econ/LegalizingVideoSlotGaming.pdf (last visited Jan. 2, 2004).

19. *Id.*

20. William R. Eadington, *The Economics of Casino Gambling*, 13 J. ECON. PERSP. 173, 175 (1999).

21. *See, e.g.*, Rychlak, *supra* note 4, at 292 (noting the positive and negative effects of casino gambling in Mississippi).

22. *Id.*

Many states are gorging themselves on their share of gamblers' losses, viewing those losses as a popular source of income "because, unlike taxes, participation is voluntary."[23] Connecticut received $350.4 million from Indian casinos during 2001.[24] Nevada reported receiving $711.6 million in gaming fees and taxes during fiscal year 2002.[25] New Jersey taxes casinos 8% on gamblers' losses, and received $347.9 million in 2002.[26] The importance of tax on gambling can be seen by the fact that gambling "now generates far more public revenues than either tobacco or alcohol," an estimated $27 billion nationwide in 2000, which is 45% more than was collected in 1997.[27]

As casinos have spread throughout the country, so have the number of slot machines.[28] There are currently an estimated 600,000 to 700,000 slot machines in operation nationwide.[29] It is difficult to discover the exact number of slot machines currently in operation. For example, Native American casinos are not required to make the same disclosures as state-regulated casinos.[30] Additionally, payback reports of slot machines and other electronic gaming devices are often grouped together indiscriminately.[31] The number of slot machines is growing rapidly, as one slot manufacturer sold almost 140,000 machines in 2002 alone, earning $846 million from those sales and an "additional $882 million from leasing and profit-sharing agreements for the highest-end models."[32]

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23. *Id.* at 311.

24. Fred Dickey, *Who's Watching the Casinos? Indian Gaming is Transforming California into the World's Gambling Mecca. Does Anyone in Sacramento Care?*, L.A. TIMES, Feb. 16, 2003, (Magazine), at 112.

25. NEVADA GAMING COMM'N AND STATE GAMING CONTROL BD., 2002 INFORMATION SHEET, *at* http://www.gaming.state.nv.us/gamefact02.htm (last visited Jan. 2, 2004) (specifying Nevada's actual received total to be $711,578,089).

26. *See* NEW JERSEY CASINO CONTROL COMM'N, CASINO REVENUE FUND 2002, *at* http:// www.state.nj.us/casinos/crf.pdf (last visited Dec. 10, 2003).

27. Morais, *supra* note 12 (citing an estimate by Christiansen Capital Advisors LLC).

28. Martha McNeil Hamilton, *More Flash, Less Cash; High-Tech Slots Offer Extra Games, Paper Payouts*, WASH. POST, Jan. 17, 2003, at E01.

29. *Id.*; *see also* JOHN GROCHOWSKI, THE SLOT MACHINE ANSWER BOOK 19 (1999) (stating that in 1999 there were probably more than half a million slot machines in operation in the United States).

30. GROCHOWSKI, *supra* note 29, at 19.

31. John Grochowski, *Slot Payback Reports are Inherently Flawed*, CHI. SUN-TIMES, Mar. 9, 2001, at 24. It is difficult to distinguish precisely between slot machines and other electronic gambling devices such as video poker, video bingo, or video lottery terminals. One potential solution would be to classify the electronic gaming device based on its features, for example, the slot machine's traditional spinning reels, either actual or simulated, that are activated by pulling a handle or pushing a button. VINCENT H. EADE & RAYMOND H. EADE, INTRODUCTION TO THE CASINO ENTERTAINMENT INDUSTRY 6 (1997).

32. Gorman, *supra* note 3. The manufacturer, IGT, "built 70% of the slot machines played in the United States today . . . ." *Id.*

Once a mere sideline to the main business of casinos—table games[33]—slot machines are now the star, as they are the top source of revenues for casinos.[34] The amount of money wagered and lost through slot machines is staggering.[35] New Jersey reported that gamblers lost over $3 billion in slot machines in New Jersey in 2002 compared to slightly more than $1 billion in table games during the same year.[36] Gamblers in Nevada dropped almost $6.5 billion in slot machines losses in 2003, or 67.3% of their total reported gaming losses in the state.[37] Slot machines are so popular that casinos dedicate about 80% of their floor space to slot machines, as well as other electronic gambling devices (EGDs).[38]

III. THE SCOPE OF PROBLEM GAMBLING

As more states have legalized more forms of gambling, the amount of problem and pathological gambling appears also to have increased.[39] The number of people who gamble excessively is, of course, difficult to measure precisely, especially given disagreement over what constitutes excessive gambling.[40] Essential elements of problem gambling are the difficulty in resisting gambling and the damage caused by gambling on the lives of gamblers, including their jobs, family, or personal lives.[41] Pathological gambling is a step beyond problem gambling.[42] Pathological gambling is classified by the American Psychiatric Association as "an impulse control disorder" and

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33. *See, e.g.*, BILL FRIEDMAN, CASINO MANAGEMENT 299 (1st ed., 1982) (noting that as recently as fiscal year 1970-1971, "slot machines still accounted for only 19 percent of the [Las Vegas] Strip's gross casino Win. . . , as the Strip gaming-table income dwarfed the slot income").

34. EADE & EADE, *supra* note 31, at 96.

35. *See, e.g.*, ATLANTIC CITY CASINO INDUSTRY, DECEMBER 2002 CASINO REVENUES, *at* http://www.state.nj.us/casinos/december02.htm (last visited Jan. 2, 2004).

36. *Id.*

37. NEVADA GAMING CONTROL BD. TAX AND LICENSE DIV., NEVADA GAMING REVENUES CALENDAR YEAR 2003 ANALYSIS, *at* http://gaming.nv.gov/documents/pdf/Cyrr03.pdf (last visited Mar. 6, 2004).

38. GARRETT, *supra* note 15, at 7.

39. *See, e.g.*, DEAN GERSTEIN ET AL., NAT'L OPINION RESEARCH CTR. AT THE UNIV. OF CHI., GAMBLING IMPACT AND BEHAVIOR STUDY (Apr. 1, 1999), at ix, *available at* http://www.norc.uchicago.edu/new/pdf/gamble.pdf (reporting that there is a direct correlation between the prevalence of problem or pathological gambling and the proximity of casinos).

40. MICHAEL B. WALKER, THE PSYCHOLOGY OF GAMBLING 151 (1992).

41. Henry R. Lesieur, *Pathological Gambling is a Psychiatric Disorder*, in LEGALIZED GAMBLING 38 (Rod L. Evans & Mark Hance eds., 1998).

42. NAT'L GAMBLING IMPACT STUDY COMM'N, NGISC FINAL REPORT 4-1 (1999) (noting that problem gamblers "fall below the threshold of at least five of the ten . . . criteria used to define pathological gambling" by the American Psychiatric Association).

it "describes 10 criteria to guide diagnoses, ranging from 'repeated unsuccessful efforts to control, cut back, or stop gambling' to committing 'illegal acts such as forgery, fraud, theft or embezzlement' to finance gambling."[43] A recent meta-analysis of 120 studies of problem gambling rates concluded that about 3.85% of Americans will be problem gamblers during their lifetime, that 1.6% will be probable pathological gamblers during their lifetime, and that 2.8% are currently (past-year) problem gamblers while 1.14% are current (past-year) probable pathological gamblers.[44]

Several studies have indicated the unsurprising result that making gambling more accessible and available increases the number of pathological gamblers,[45] though this conclusion has been disputed.[46] In one study, researchers found that, during a seven-year period, as more gambling opportunities became available, the number of pathological gamblers grew by 75%.[47] Another study concluded that the "availability of a casino within 50 miles (versus 50 to 250 miles) is associated with about double the prevalence of problem and pathological gamblers."[48] Other evidence of the link between increased gambling opportunity and increased pathological gambling can be seen in "the

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43. *Id.* (citing the American Psychiatric Association Diagnostic and Statistical Manual of Mental Disorders).

44. HOWARD J. SHAFFER ET AL., HARVARD MED. SCH. DIV. ON ADDICTIONS, ESTIMATING THE PREVALENCE OF DISORDERED GAMBLING BEHAVIOR IN THE UNITED STATES AND CANADA: A META-ANALYSIS iii (Dec. 15, 1997), *available at* http://www.hms.harvard.edu/doa/html/publications/meta.pdf (last visited Jan. 2, 2002).

45. Louise Sharpe, *A Reformulated Cognitive-Behavioral Model of Problem Gambling: A Biopsychosocial Perspective*, 22 CLINICAL PSYCHOL. REV. 1, 6 (2002); WALKER, *supra* note 40, at 151; Robert Ladouceur et al., *Prevalence of Problem Gambling: A Replication Study 7 Years Later*, 44 CAN. J. PSYCHIATRY 802 (1999). Rachel Volberg, who has conducted many prevalence studies, states, "Results from a range of epidemiological studies support the existence of a link between the availability of some types of legal gambling and higher rates of problem and pathological gambling." Rachel A. Volberg, *Fifteen Years of Problem Gambling Research: What Do We Know? Where Do We Go?*, EGAMBLING, Feb. 2004, *at* http://www.camh.net/egambling/issue10/ejgi_10_volberg.html (last visited Jan. 2, 2002).

46. NATIONAL PUBLIC SECTOR GAMING STUDY COMMISSION, FINAL REPORT 35 (2000), *available at* http://www.fsu.edu/~iog/psgcs.html (last visited Jan. 2, 2004) ("There is no solid basis for concluding that the wider legalization of gambling, which has cut into illegal gambling and friendly betting, has caused a concomitant increase in pathological gambling.").

47. Ladouceur et al., *supra* note 45, at 802-04 (1999).

48. GERSTEIN ET AL., *supra* note 39, at ix. Shaffer and Korn note, however, that it is impossible to determine whether proximity to a casino causes the increased prevalence rate or, alternatively, whether (a) problem gamblers are more likely to choose to live close to a casino, or (b) casino operators choose sites near populations with higher rates of problem gambling. Howard J. Shaffer & David A. Korn, *Gambling and Related Mental Disorders: A Public Health Analysis*, 23 ANN. REV. PUB. HEALTH 171, 177 (2002), *available at* http://arjournals.annualreviews.org/doi/abs/10.1146/annurev.publhealth.23.100901.140532 (last visited Jan. 2, 2004).

tremendous increase in the numbers of gamblers seeking help when casinos enter a market [and] the increase in gamblers anonymous groups when gambling enters a state. . . ."[49] After reviewing the conflicting studies regarding whether problem gambling is on the rise, researchers have concluded that "evidence suggests that adults from the general population are evidencing a low but gradually increasing rate of gambling disorders. If this trend continues unabated, it might become appropriate to characterize disordered gambling in the general adult population as pandemic."[50]

The fairly small percentage of problem gamblers accounts for a far higher percentage of casino income, with estimates varying substantially.[51] The gambling industry, however, argues that little of its profits are due to gambling addiction and that it prefers not to deal with pathological gamblers.[52]

Not only are slot machines and other electronic gaming machines among the most popular, they are also among the most closely linked to problem gambling.[53] First, they are the easiest form of gambling; "non-threatening and user friendly to the uninitiated, thus[,] they may offer an unparalleled 'gateway' activity to gambling."[54] They are the most continuous form of gambling, as the slot player does not have to wait for horses to run, a dealer to shuffle or deal, or a roulette

49. Earl L. Grinols & David B. Mustard, *Business Profitability Versus Social Profitability: Evaluating Industries with Externalities, the Case of Casinos*, 22 MANAGERIAL DECISION ECON. 143, 156 (2001).

50. Shaffer & Korn, *supra* note 48, at 186 (concluding that "[f]or now, however, to clarify this kind of characterization, prospective epidemiological studies are needed").

51. The National Opinion Research Center estimated that problem and pathological gamblers account for about 15% of all gambling losses. GERSTEIN ET AL., *supra* note 39, at 33-34 (stating that "[i]n casino play, problem and pathological gamblers account for 22.1 percent of past-year losses"). By comparison, a 1999 study concluded that, in Louisiana, almost 30% of all riverboat casino spending comes from problem and pathological gamblers, as does over 42% of all Indian reservation casino spending in Louisiana. TIMOTHY P. RYAN ET AL., GAMBLING IN LOUISIANA: A BENEFIT/COST ANALYSIS 99 (1999).

52. *See, e.g.,* Cory Aronovitz, *The Regulation of Commercial Gaming*, 5 CHAP. L. REV. 181, 200 (2002).

> Compulsive or pathological gamblers account for a small percentage of all adults who participate in legal gaming activities. Typically, casinos do not consider compulsive gamblers to be good customers; although they will likely risk losing everything in order to gamble, casinos actually prefer repeat customers that gamble with discretionary income in exchange for receipt of entertainment value.

Id. Aronovitz, a nationally prominent gaming law attorney, fails to provide the basis for his assertions regarding the percentage of gamblers who are compulsive or pathological. *See generally id.*

53. Robert B. Breen & Mark Zimmerman, *Rapid Onset of Pathological Gambling in Machine Gamblers*, 18 J. GAMBLING STUD. 31, 33 (2002).

54. *Id.* at 32.

wheel to stop spinning.[55] A fast slot player can average almost one thousand wagers an hour, approximately one wager every four seconds.[56] Slot machines, moreover, allow players to regamble any winnings they receive almost immediately, with little time to ponder the financial repercussions.[57]

Slot machine players account for a distressing percentage of problem gamblers.[58] Studies estimate that up to 70% of treatment-seeking pathological gamblers identify electronic gaming machines as their primary, if not exclusive, problem form of gambling.[59] Worse yet, slot machine players are among the fastest to 'bottom out' and reach the depths of full problem or pathological gambling.[60] One study indicated that the onset of pathological gambling occurred in a third of the time, on average, for machine gamblers compared to traditional gamblers.[61]

In determining whether to legalize gambling, states have generally sought to balance the social costs of gambling, like crime, with gambling's public benefit, such as increased employment.[62] Some states have tried to ascertain the complete social costs of gambling as well as its social benefit, in order to compare the two.[63] This analysis is a difficult, if not impossible, undertaking, and each side of the de-

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55. *Id.* (stating that "[m]achines are the most continuous medium of gambling. Bets can be made and decided in a matter of seconds, with virtually no delay before the pattern is repeated").

56. John Grochowski, *The Faster the Game, The Faster You Stand to Lose Your Bankroll,* DETROIT NEWS, Jan. 23, 2003, *available at* http://info.detnews.com/casino/columns/details.cfm?column=grochowski&myrec=161 (last visited Jan. 2, 2004).

57. Mark Griffiths, *Fruit Machine Gambling: The Importance of Structural Characteristics,* 9 J. GAMBLING STUD. 101, 107 (1993).

58. Breen & Zimmerman, *supra* note 53, at 31, 33 (noting studies that showed that a "majority (upwards of 70%) of treatment-seeking [pathological gamblers] participated almost exclusively in machine gambling").

59. *Id.*

60. VALERIE C. LORENZ ET AL., FINAL REPORT OF THE TASK FORCE ON GAMBLING ADDICTION IN MARYLAND 16 (Feb. 15, 1990), *available at* http://www.nyu.edu/its/socsci/Docs/task_force_4.html (last visited Jan. 2, 2004); *see also* Rychlak, *supra* note 4, at 292 (detailing many of the problems that gambling facilitates).

61. Breen & Zimmerman, *supra* note 53, at 41 (finding that for the subjects in their sample, the mean latency until the onset of pathological gambling was only 1.08 years for machine gamblers, compared to 3.58 years for traditional gamblers).

62. *See, e.g.,* RYAN ET AL., *supra* note 51, at 17-21 (noting the possible costs and benefits derived from legalized gambling).

63. *Id.* The Report states, however, that
   there are some costs and benefits that are impossible or difficult to quantify but are important . . . . Since non-quantifiable costs and benefits cannot be included, readers must understand that it is impossible to reach a simple conclusion that "gambling is good for the State" or "gambling is bad for the State."
Id. at 17.

bate tends to exaggerate either the costs or benefits of casinos, de-
pending on whether they support or condemn them.[64]

There is great conflict over how to define and ascertain both the
social costs and the public gains that can be attributed to gambling.[65]
Estimates of these social costs vary wildly, depending on how they are
defined and which sets of data are used to derive the costs.[66] Some
have argued that gambling's effects include higher rates of crime, in-
cluding prostitution and white collar crime, detrimental effects on
families,[67] such as increased rates of divorce and child abuse, and in-
creases in drug and alcohol addiction.[68] Others claim that gambling
hurts the economy of a state in which it is legal; they assert that legal-
ized gambling destabilizes the business environment, increasing per-
sonnel costs,[69] and increases the number of personal bankruptcies,
forcing third parties to lose money because of the gamblers' inability
or unwillingness to pay their debts.[70] Gambling is often part of,
though not necessarily the cause of, many ruined lives.[71] For exam-

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64. Douglas Clement, *Milking the New Buffalo*, FEDGAZETTE, Mar. 1, 2003, at 6.

65. *See* Douglas M. Walker, *Methodological Issues in the Social Cost of Gambling Studies*, 19 J.
GAMBLING STUD. 149, 153 (2003) (defining social costs "as a decrease in the aggregate real
wealth of society"). Eadington distinguishes between the "narrow" definition of social costs
as negative changes in total social wealth and the "broader" definition that also includes
non-market effects on gamblers and their families and acquaintances. William R. Ead-
ington, *Measuring Costs from Permitted Gaming: Concepts and Categories in Evaluating Gam-
bling's Consequences*, 19 J. GAMBLING STUD. 185, 185 (2003).

66. Estimates range at least from $8,600 to $100,000 per year for each pathological
gambler. DUNSTAN, *supra* note 9; RYAN ET AL., *supra* note 51, at 95-97 (estimating the social
costs per problem gambler at $10,958 in Louisiana, $8,635 in Wisconsin, and $16,034 in
Connecticut); *see also* Senator Paul Simon, *Gambling Has High Social Costs and Should Be
Restricted by the Government, in* LEGALIZED GAMBLING, *supra* note 41, at 211 (noting that esti-
mates range from $13,200 to $30,000 per year for each problem gambler).

67. A study conducted by economist Melissa Schettini Kearney found that, after a state
lottery was introduced, households with incomes in the lowest third lowered their expendi-
tures on food consumed in the home, rent, home mortgage, and other bills. MELISSA
SCHETTINI KEARNEY, STATE LOTTERIES AND CONSUMER BEHAVIOR (Feb. 2003), *available at*
http://www.wellesley.edu/Economics/kearney/mskearney-lotteries.pdf (last visited Jan. 2,
2004).

68. Paul H. Brietzke & Teresa L. Kline, *The Law and Economics of Native American Casi-
nos*, 78 NEB. L. REV. 263, 271 (1999).

69. John Warren Kindt, *Legalized Gambling is Bad for Business, in* LEGALIZED GAMBLING,
supra note 41, at 134-50. For a telling criticism of Kindt's work on the social costs of gam-
bling, see William R. Eadington, *Comment on "The Costs of Addicted Gamblers: Should the States
Initiate Mega-Lawsuits Similar to the Tobacco Cases?,"* 22 MANAGERIAL DECISION ECON. 17
(2001).

70. Kindt, *supra* note 69, at 132-34.

71. Brietzke & Kline, *supra* note 68, at 268.

ple, gambling has been cited as a cause of "alcoholism, drug addiction, over-eating, and suicide."[72]

At the same time, other researchers argue that studies of the social costs of gambling are riddled with methodological errors and weakened by the lack of systematic data.[73] Opponents of gambling typically count as costs those transactions that are merely transfers of money,[74] while omitting from the calculus the primary benefit of gambling—its entertainment value to the gambler.[75] Although it is easy to find anecdotal evidence that pathological gambling causes an increase in crime, suicide, or family problems, it is nonetheless difficult to prove this connection for many reasons; it is difficult to find and track reliable data on these problems, and pathological gambling may be merely one disorder in a set of behavior disorders, not necessarily the cause of the other disorders.[76] It appears that, in this relatively new field, there is no commonly recognized set of definitions or even methodology; therefore, it is difficult to determine with any precision or widespread agreement what gambling's social costs are.[77] There are so many disputes about the social costs of gambling that the creation of studies and the rejection of those studies virtually has become a cottage industry.[78]

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72. *Id.* (citing William N. Thompson & Ricardo Gazel, *The Last Resort Revisited: The Spread of Gambling as a "Prisoner's Dilemma,"* in GAMBLING: PUBLIC POLICIES AND THE SOCIAL SCIENCES (William R. Eadington & Judy A. Cornelius eds., 1997)).

73. Walker, *supra* note 65, at 150.

74. Liz Benston, *Expert: Problem Gambling Study Flawed,* LAS VEGAS SUN, Mar. 31, 2003, *available at* http://www.lasvegassun.com/sunbin/stories/text/2003/mar/31/514877368.html (last visited Jan. 2, 2004).

75. Clement, *supra* note 64 ("[C]asino opponents tend to neglect the very real entertainment value of casinos—millions of consumers voicing their preferences by spending money on casino gambling . . . .").

76. U.S. GEN. ACCOUNTING OFFICE, IMPACT OF GAMBLING: ECONOMIC EFFECTS MORE MEASURABLE THAN SOCIAL EFFECTS 54 (2000), *available at* http://www.gao.gov/new.items/gg00078.pdf (last visited Jan. 2, 2004).

77. Eadington, *supra* note 20, at 188 ("[S]tudies in this area are fraught with conceptual difficulties and are supported by only limited empirical evidence . . . . Many of the costs identified are internal to the individual or household, as opposed to external—borne by society—and are therefore difficult to place into a cost-benefit framework.").

78. *See* Liz Benston, *Critics: Problem Gambling Analysis Flawed,* LAS VEGAS SUN, Mar. 25, 2003, *available at* http://www.lasvegassun.com/sunbin/stories/archives/2003/mar/25/514851534.html (last visited Jan. 2, 2004) (noting a study by UNLV professors William Thompson and Keith Schwer, which estimated that addicted gamblers in Southern Nevada cost between $300 million to $470 million per year, approximately $8000 per problem gambler per year—a claim disputed by economist Douglas Walker). Walker had previously published a critique of a 1996 study conducted by Thompson and is expected to publish a critique of this latest study as well. *Id.*

Similarly, there is dispute about how to calculate the positive economic effects of legalized gambling.[79] States have claimed that casino gambling not only generates revenue for the states, but it also has "lowered their unemployment rates, decreased their welfare and other subsidy payments, and revitalized local economies."[80] Other claimed benefits include the development of tourism, the revitalization of a waterfront or urban area, and aid to an underprivileged or otherwise needy group.[81] These claims and the studies upon which the states have relied have been challenged.[82] Even when casinos create jobs, they may not be improving the local employment conditions if the casinos are hiring workers from outside the local area or where they are merely cannibalizing other local industries.[83]

Gambling might also have positive health benefits, providing not only a form of adult entertainment, but also a means of social interaction for adults, especially older adults who have fewer recreational alternatives.[84] Gambling could even act as "a buffer against the development or progression of mental health problems" by "catch[ing]" people before they become unstable, "occupying their attention and shifting their subjective focus."[85] This distraction may prevent them from becoming even more disordered.[86]

In the past, states have taken a patriarchal approach in determining whether gambling is in the best interests of their citizens, normally

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79. *See* Grinols & Mustard, *supra* note 49, at 143-44 (noting the disagreements over which factors should be counted as costs and benefits in studies on gambling).

80. NATIONAL PUBLIC SECTOR GAMING STUDY COMMISSION, *supra* note 46, at 11.

81. Eadington, *supra* note 20, at 186.

82. *See, e.g.*, Grinols & Mustard, *supra* note 49, at 143 (noting that "[m]any studies pay a great deal of attention, for example, to estimating the number of direct and indirect jobs that casinos create and to tallying the taxes casinos pay, but do not explain the social value of an additional job or calculate the lost taxes of competing non-casino businesses"); Eadington, *supra* note 20, at 187 (noting that "the methodology to distinguish fully between absolute measures of economic impacts and incremental impacts—in comparison to what would have taken place in absence of casino authorization—is still in need of considerable refinement").

83. GARRETT, *supra* note 15, at 24. Garrett's study concluded that casinos increased employment in three of four rural counties studied, though the effect was harder to detect for metropolitan counties. *Id.* at 23.

84. David A. Korn & Howard J. Shaffer, *Gambling and the Health of the Public: Adopting a Public Health Perspective*, 15 J. GAMBLING STUD. 289, 294-95 (1999). Korn and Shaffer note that gambling "can be viewed as a form of adult play," and that "seniors also may represent a population segment that receives considerable health benefit from their gambling activity." *Id.* at 325, 339.

85. Shaffer & Korn, *supra* note 48, at 179 n.2.

86. *Id.*

opting to ban it.[87] This approach suffers from the flawed information gathering methodology needed to determine whether gambling will harm the state's citizens.[88] On the other hand, the alternative approach—allowing individual gamblers to decide whether and how much to gamble—permits gamblers to determine the extent of their participation by making their own personal cost-benefit analyses.[89] For these personal cost-benefit analyses to be most efficient, however, and free of the informational flaws from which the statewide cost-benefit analyses suffer, individuals need clear, accurate, and, timely information about the price of their gambling opportunities.

Although states have often sought to capitalize on the increase of gambling within their borders, they have done distressingly little to aid problem or pathological gamblers.[90] Some states have implemented self-exclusion programs, designed to allow problem gamblers to bar themselves from casinos.[91] The states that benefit most from gambling, Nevada and New Jersey, unsurprisingly have the weakest self-exclusion programs.[92] While states harvest their share of money lost by problem gamblers, they spend too little of it on programs to treat these gamblers.[93] Nevada "has never spent a dime on treatment for problem gamblers,"[94] and even a legislative effort to provide such funding currently would earmark only $250,000—a pittance.[95] Delaware applies only 1% of its income from gambling to treat problem gamblers, though the resulting $1.25 million was significantly more than New Jersey's $700,000 in such expenditures.[96] Maryland, even though it was the first state to fund gambling addiction treatment programs, ceased all funding for such programs in 2002.[97] New York re-

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87. *See supra* notes 8-11 and accompanying text (noting that most states banned gambling up until 1976).

88. *See supra* notes 73-78 (discussing the difficulties in conducting accurate studies on the social cost of gambling).

89. *See infra* notes 156-162 and accompanying text (explaining how the government does not provide effective information to gamblers to assist in consumer cost-benefit analysis).

90. For a discussion of self-exclusion programs, see Kurt Eggert, *Lashed to the Mast and Crying for Help: How Self-Limitation of Autonomy Can Protect Elders from Predatory Lending*, 36 LOYOLA L. REV. 693 (2003).

91. *See id.* at 748-58 (discussing self-exclusion programs in the gaming industry).

92. *See id.* at 748 n.217 (noting the self-exclusion programs in a number of states).

93. *See, e.g.*, Liz Benston, *Nevada Problem Gambling Program Launches Today*, LAS VEGAS SUN, Mar. 11, 2003, at 1.

94. *Id.* (quoting Bo Bernhard, assistant professor of hotel management at the University of Nevada, Las Vegas).

95. *But see id.* (stating that $250,000 is a step in the right direction).

96. Doug Donovan, *Addicts May Get Aid from Slots*, BALT. SUN, Mar. 10, 2003, at 1B.

97. *Id.*

portedly spent just $1.7 million on treatment and education for gamblers, while selling $4.75 billion in lottery tickets.[98] Even though the State of New York has become a "full–blown bazaar of television, radio and billboard ads for lotteries, casinos, Quick Draw and horse racing," New York, in 2003, had only seven state-dedicated gambling treatment programs.[99] Although the number and popularity of professional treatment programs targeted at pathological gamblers are growing,[100] there are few residential gambling treatment centers across the nation.[101]

IV. CALCULATING THE AVERAGE PRICE OF A WAGER

Although gambling opportunities and the risk of problem gambling have multiplied throughout the country, so far no governmental entity has taken a seemingly basic step toward helping people control their gambling, requiring casinos and other slot machine operators to disclose accurate, clear, and timely price information regarding their product.[102] Before any discussion of how to disclose the true cost of gambling or the effect of such disclosure, it is first necessary to understand how to calculate that cost.[103] The average cost of any wager can be expressed as either the average percentage of each bet the gambler loses and hence, the casino wins, or as the average amount lost by the gambler for a bet of a given size.[104] If on a given game, on average, a gambler loses one dollar for each ten dollars bet, then the average percentage lost is 10% and the average amount lost on a ten dollar bet is one dollar. To this average price should be added any transaction

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98. Kate Gurnett, *Hidden Addiction, Scant Treatment*, TIMES UNION (Albany, N.Y.), Jan. 13, 2003, at A1 (quoting James Maney, executive director of the New York Council on Problem Gambling).

99. Kate Gurnett, *Gambling Fever Ups the Ante*, TIMES UNION (Albany, N.Y.), Jan. 12, 2003, at A1.

100. Nancy M. Petry, *Patterns and Correlates of Gamblers Anonymous Attendance in Pathological Gamblers Seeking Professional Treatment*, 28 ADDICTIVE BEHAVS. 1049, 1050 (2003).

101. Gurnett, *supra* note 98.

102. *See infra* notes 147-155 (noting that even the casinos do not typically voluntarily release accurate price information and the government does not require any such disclosures).

103. *See* ROBERT C. HANNUM & ANTHONY N. CABOT, PRACTICAL CASINO MATH (2001) (discussing the underlying mathematics of casino games, the odds associated with the games, and the use of mathematics in casino gaming management).

104. *Id.* at 9. To calculate the average cost of or loss from a simple gamble, one would multiply the probability of winning by the value of the money that could be won and then subtract that total from the amount bet. *Id.* For example, if a dollar slot machine provided a one in a thousand chance of winning $900, then the slot machine would return on average $900 for each $1,000 dollar bet or ninety cents on the dollar. *Id.* This leaves a 10% average expected profit for the house and loss for the gambler. *Id.*; *see* JAMES WALSH, TRUE ODDS 342-44 (1996) (explaining how to calculate expected value in the gambling context).

costs or other indirect costs in order to obtain the total cost of the
wager.[105] The average percentage lost is referred to as the "house ad-
vantage," the "house edge," or the "hold percentage." Most casino
games are designed to have an average rate of loss built into the
game—the average percentage of wagers that a gambler can, in the-
ory, expect to lose during the course of wagering, though actual losses
may vary dramatically from the theoretical average loss rate. The the-
oretical average loss percentage in table games is referred to as the
"house advantage" or "house edge." For slot machines, it is referred
to as the "hold percentage," though the term "hold percentage" has a
completely different, more arcane meaning in table games.[106] Be-
cause this article focuses on consumer protection in slot machines
and other electronic games, it uses the term "hold percentage" gener-

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105. Melissa Schettini Kearney, *State Lotteries and Consumer Behavior* 8 (Sept. 2003), *avail-
able at* http://www.wellesley.edu/Economics/kearney/mskearney-lotteries-9-03.pdf.

106. HANNUM & CABOT, *supra* note 103, at 10. The term "hold percentage" has differing
meanings. *See id.* at 37-56. Much of the terminology used to describe casinos' pricing
suffers from twin flaws. The terms are used inconsistently, with different meanings as-
signed to the same term and different terms having the same meaning. Furthermore, the
terminology is framed from the point of view of the casinos, calling the average losses of
gamblers the "win percentage," for example. In this Article, I am reconstructing that ter-
minology to be more consistent and to focus on the consumer in order to further the goal
of consumer protection. The New Mexico Gaming Control Board rules define "hold per-
centage" to be "the percent of coins or credits played that are retained by the gaming
machine; it is determined by subtracting the payback percentage from 100%." N.M. AD-
MIN. CODE tit. 15, § 1.8.7(K) (2003). Hannum and Cabot define the hold percentage not
as the percentage that a casino would win, on average from each bet, but rather the per-
centage that, on average, a casino would win from the "drop," which is the amount that the
player is prepared to put at risk in a game. HANNUM & CABOT, *supra* note 103, at 43-45. In
many table games, the exact amount of the bet is not tracked by casinos, as they have no
way of monitoring the flow of chips between dealers and players. *See id.* at 38 (explaining
that casinos "must rely on limited or less-than-perfect information to do its analyses"). For
some table games such as blackjack, the hold percentage, as defined by Cabot and Han-
num, may differ substantially from the house advantage because players may regamble
winnings or may not ever wager all of their drop. *Id.* at 43-45. For slot machines and other
electronic games, however, the drop is defined by how much a player actually wagers, and
so the hold percentage and the house advantage are the same. *Id.* at 42-43. One can also
distinguish between the theoretical hold percentage, which is the percentage the slot ma-
chine is designed to withhold on average, and the actual hold percentage, which is the
percentage a machine has withheld during some past period. Because my analysis concen-
trates on warnings for slot machines, for the purposes of this Article, "hold percentage" will
be used generally to indicate the theoretical percentage of coins or money on average
retained by the machine. Also, a standardization of gambling terms is required to disclose
prices to consumers. I have chosen "hold percentage" over the optional terms, "house
advantage" and "house edge," because I think it best communicates the concept that the
casino is, typically, holding that money and not returning it. Moreover, using "hold per-
centage" allows me to create the alternative term "hold amount" to express the average loss
in a specific sum. The gaming industry should create a better term for the old Hannum-
Cabot definition of hold percentage defined as the percentage of the drop won by the
casino. One possibility is calling it the "win-drop percentage."

ally to mean the rate of theoretical average loss faced by gamblers in those games. Too often, the cost of slot machines is expressed in a more confusing manner, in terms of a "payback percentage," which is the percentage of the bet that is on average returned to the gambler.[107]

I define the "hold amount" as the average sum, not percentage, of money a gambler will lose from a bet of a particular size, such as ten cents from a dollar bet. The true cost of a particular wager can, thus, be expressed either as a hold percentage or a hold amount.[108] Many gamblers have difficulty understanding that the effective average price of any wager is the hold amount, as such an understanding is, to some extent, counter-intuitive.[109] The price of a dollar slot machine appears to be a dollar, and what is purchased is a chance at some winnings. This impression, however, ignores the fact that the product involves the return of money.[110] The average net price of a dollar slot machine is not one dollar; rather, it is the amount on average that the casino does not return from the dollar, or the hold amount.[111]

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107. For example, the rules and regulations of the New Mexico Gaming Control Board define "payback percentage" as "the theoretical percentage that will be won by a player during a cycle of play on the machine." N.M. ADMIN. CODE tit. 15, § 1.8.7(N) (2003). The payback percentage can be calculated by subtracting the hold percentage from 100%, as the average amount of the player's wager that is not returned to the player constitutes the player's average losses. Jeffrey E. Milligan, *Statistical Verification Techniques for Discovering Slot Machine Malfunctions and Theft, in* GAMBLING AND COMMERCIAL GAMING: ESSAYS IN BUSINESS, ECONOMICS, PHILOSOPHY AND SCIENCE 171, 172-73 (William R. Eadington & Judy A. Cornelius eds., 1992).

108. FRIEDMAN, *supra* note 33, at 20.

> A casino deals in financial transactions, and it earns its profit by charging customers a fee for the privilege of participating in each gambling transaction. This fee is not a set amount taken out of every wager . . . . Instead, it is the average amount that statistical analysis predicts will be taken out of a great number of wagers, and this average percentage is called the *casino advantage.*

Id. The hold amount of a bet is equal to the bet's expected value to the casino, as it is how much a casino can expect to win on average on a bet of a given size. HANNUM & CABOT, *supra* note 103, at 35.

109. "The price of casino gaming is frequently a matter of some confusion . . . . The average, or effective, price of gambling is thus the edge for each bet or slot machine weighted by the total handle, or amount wagered, on each bet or slot machine." VICKI ABT ET AL., THE BUSINESS OF RISK: COMMERCIAL GAMBLING IN MAINSTREAM AMERICA 74-75 (1985). By "edge," the authors are referring to the hold percentage. *Id.* at 74.

110. One way to conceptualize the price of gambling is to imagine an ice cream vendor who decides to liven up his business by varying his prices. To buy a cone, a purchaser must give the vendor a $10 bill. Sometimes the vendor gives no change back, sometimes $5, sometimes $10 sometimes even $20 in change. On average, however, the vendor gives back exactly $9 in change. Most people would conclude that the ice cream costs on average $1, even though the initial stake the purchasers must tender is $10.

111. ABT ET AL., *supra* note 109, at 262.

One of the reasons that the hold percentage is so seldomly dis-
cussed, in addition to casinos' natural reluctance to detail their cus-
tomers' losses, is the difficulty in mentally calculating this
percentage.[112] The hold percentage for a slot-machine wager is equal
to the sum of all of the possible amounts that a casino could either
win or lose, each multiplied by the possibility of that particular win or
loss, with the resulting number divided by the amount wagered and
then multiplied by one hundred.[113] For casinos or other gambling
operations to turn a profit, naturally the overall hold percentage of
the games offered must be a positive number.[114]

V. The Absence of Effective Price Disclosure for Slot Machines

The amount of price information available to gamblers varies dra-
matically by the type of casino game offered.[115] For most standard
casino games, notably card games such as blackjack and poker, there
is a ready market supplying information regarding the odds of the
particular game.[116] A game like video poker, with a complicated table
of returns for each possible winning hand, is much more difficult to
parse and to calculate the exact hold percentage.[117] However, gam-

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112. *See supra* note 106 and accompanying text (describing the difficulty in calculating
the hold percentage).

113. In mathematical terms, the hold percentage for a slot-machine wager may be ex-
pressed as follows: **Theoretical Slot-Hold Percentage = $100 * (\Sigma_i$ (Net Pay$_i \times$ P$_i$)) / Amount
Wagered.** "*" is used as a multiplication sign, "Σ_i" means the summation of all the follow-
ing equations for each possible value, "Net Pay$_i$" is each possible win or loss amount for a
casino that a game might render, and "P$_i$" is the probability of that particular win or loss
amount. This formula is adapted from HANNUM & CABOT, *supra* note 103, at 35. For a
related formulation of the hold percentage, see Milligan, *supra* note 107, at 177.

114. The total amount bet, ignoring how much is won or lost, is referred to as the "han-
dle." FRIEDMAN, *supra* note 33, at 21. By comparison, the "drop" is the amount of the
customer's money that they are willing to wager. *Id.* at 18. For example, if a customer
walks into a casino with $100 and plays slot machines until he loses his entire stake, the
drop from that gambler will be $100. The handle will likely be far greater, as he will
probably have won at least some of his bets and then rebet those winnings.

115. *See* ANTHONY N. CABOT, CASINO GAMBLING: POLICY, ECONOMICS, AND REGULATION 90
(1996) (noting that "availability of information in the casino industry is uneven").

116. Cabot notes that "[l]iterally hundreds of books are available that provide detailed
information to gamblers as to the odds of every casino game based on individual casino
rules. If gamblers do not like the game that the casino offers, gamblers can either go
elsewhere or not play." *Id.*

117. Glenn Weber & W. Todd Scruggs, *A Mathematical and Computer Analysis of Video
Poker, in* GAMBLING AND COMMERCIAL GAMING: ESSAYS IN BUSINESS, ECONOMICS, PHILOSOPHY
AND SCIENCE, *supra* note 107, at 625-33 (discussing the difficulty inherent in determining
the exact payback percentage in video poker). The authors combined a mathematical
analysis of video poker with a computer simulation of 500 million video poker games.
They were unable to reach a final conclusion about how the common higher payout for

blers can purchase computer aids that inform them of the payback rate of any video poker game for "perfect play," so long as the gambler can punch in the pay-offs for each winning hand.[118] Although few players can achieve perfect play, given the limitations on their abilities, their time, or their bankroll, the player can at least obtain some idea of how the individual machine compares to other machines that the player might use.[119] Casinos, of course, have strategies to counter players' attempts to calculate the hold rate of video poker and have introduced pay tables that appear to be looser, but have hidden costs unfamiliar to many players.[120]

Unlike other gamblers, even the most sophisticated and knowledgeable slot machine players typically cannot determine the average expected price of their game.[121] Unlike blackjack, craps, or roulette, the odds of winning in slot machines are not inherent in the structure of the machines.[122] While blackjack necessarily involves fifty-two cards with predetermined functions, computer-driven slot machines depend on a random number generator, with each possible number from a range that may be in the billions corresponding to a distinct combination of symbols that then appear on the machine's virtual reels.[123] Even if a gambler knew how many stops there were on each virtual wheel, which exact symbols were on each virtual stop, and the chances of landing on each stop, determining the exact hold percentage for an individual slot machine would require more extensive pow-

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Royal Flushes, occurring when the player inserts the maximum amount of coins allowed per hand, would affect the optimal return. *Id.* at 625, 632.

    118. *See* Bob Dancer & Jeffrey Compton, *Writers Explain Common Gaming Terminology*, LAS VEGAS REV.-J., July 13, 2001, at 31J (defining terminology pertaining to gambling pay schedules). "Perfect play" does not require the player to be omniscient, precisely determining which cards should be held or discarded. *See id.* Rather, it means that the player holds or discards individual cards based statistically on which hold will maximize the player's returns given the uncertainty of what new cards will be dealt. *See id.*

    119. *See* BASIL NESTOR, THE UNOFFICIAL GUIDE TO CASINO GAMBLING 68-69 (1999) (describing the difficulty in achieving perfect play in video poker).

    120. *Id.* at 67. Nestor states:

> In the early days of video poker when these three games were most common it was easy to look for a 9/6, settle for 8/5 and avoid 6/5. This clarity made some machines less popular so casinos countered with measures to muddy the water . . . . These days more than four dozen versions of video poker can be found with paybacks ranging from 91% to 100% and occasionally higher . . . . The result of so many choices is that the traditional wisdom of looking primarily for a 9/6 Jacks-or-Better machine doesn't work so well anymore.

Id.

    121. HANNUM & CABOT, *supra* note 103, at 209.

    122. *See infra* notes 134-139 and accompanying text (explaining the difficulty in ascertaining slot machine returns).

    123. NESTOR, *supra* note 119, at 44.

ers of calculation than most slot players possess.[124] Without knowing how many virtual stops a slot machine has as well as how many of each type of symbol each stop contains, a gambler cannot determine the true price of a slot machine.[125]

With today's computer-driven slot machines, casinos can alter the likelihood that any particular symbol will appear.[126] This advanced technology of computer-driven slot machines "makes it possible to have identical machines with different rates of return,"[127] and it is virtually impossible, without help from the casino or the manufacturer, for the consumer to learn how any individual slot machine is set.[128] Of course, the manufacturer and casino have some obligations concerning the manufacture and operation of their machinery, but the regulations in place do surprisingly little to inform the consumer of the true cost of playing an individual slot machine.[129]

This price information is crucial to gamblers because of the great range of prices available in slot machines across the country, varying as much as from 0.5% to 30% or even more, meaning that one machine could cost sixty times as much as another machine without the consumer being notified of the price differential.[130] If the consumer enjoys playing the slot machines so much that it would be worth an expected average loss of $20 per hour to play, the consumer often has no way of knowing whether his expected average loss would be more or less than that amount.[131] A dollar slot player could face average losses of $2.50 per hour to $150 per hour or more without any disclosure of the different prices.[132]

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124. *See, e.g.*, Milligan, *supra* note 107, at 172-74 (considering the difficult calculations required to determine the hold percentage of even a simple slot machine with twenty-two stops, three reels, and one pay line).

125. Anthony N. Cabot & Robert C. Hannum, *Gaming Regulation and Mathematics: A Marriage of Necessity*, 35 J. MARSHALL L. REV. 333, 341 (2002).

126. HANNUM & CABOT, *supra* note 103, at 59 ("Since traditional spinning reel machines are no longer mechanical but controlled by computer microchips like video 'reel' machines, they also can be programmed for virtually any number of 'stops,' any hit frequency, and any house advantage within the limits of applicable regulations.").

127. NESTOR, *supra* note 119, at 44.

128. CABOT, *supra* note 115, at 421.

129. *See, e.g.*, NEV. ADMIN. CODE ch. 14, § 14.040(1) (2002) (noting that all gaming devices must be set to have no greater than a 25% hold percentage or 75% payback percentage). Most Nevada slot machines have a much smaller hold percentage, but casinos are not required to disclose how much smaller. *Id.*

130. HANNUM & CABOT, *supra* note 103, at 61.

131. CABOT, *supra* note 115, at 90.

132. Playing five hundred times an hour for $1 per attempt, a player on a 0.5% machine would on average lose $2.50 per hour, while one on a 30% machine would on average lose $150 an hour, a price differential that would clearly affect most players' willingness to play. Hannum and Cabot estimate that casinos can expect slot machine players to average

Manufacturers of slot machines can exactly determine a particular machine's hold percentage and pass that information on to casinos.[133] Slot machine players cannot obtain even a rough idea of an individual machine's hold percentage without playing it for an immense number of games.[134] Furthermore, casinos can easily manipulate the payout distributions of their machines to mislead players regarding which machines are looser or tighter.[135] For example, casinos can increase the "payoff frequency," also called the "hit percentage," of their machines, which is "probability of receiving some type of payoff on a given handle pull."[136] The "hit percentage" can be increased without altering the hold percentage of the machine,[137] merely by increasing the frequency of small pay-offs.[138] Because players would receive more regular payouts from machines with higher hit percentages, they might perceive those machines to be looser even though the hold percentages might even be higher and the gambler, on average, would be losing more money.[139]

Some casinos publicly display the payback percentages of a select few of their individual machines, often ones with hold percentages significantly lower than other machines of the same denomination.[140] While casinos sometimes advertise the overall pay-off rates of their slot machines, they often do so in terms of saying that the slot machines have payback percentages "up to 97[%]."[141] Clearly, "up to 97[%]"

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roughly five hundred wagers per hour. HANNUM & CABOT, *supra* note 103, at 63, 171. A fast player could obtain almost a thousand wagers per hour on a slot machine. Grochowski, *supra* note 56.

133. An executive officer of a slot machine manufacturer stated that his company uses a public domain random number generator "that has been well documented and thoroughly tested by many mathematicians, in addition to being thoroughly tested in house . . . [therefore] when we make a 97.2% payback machine, we know it is truly a 97.2% payback machine." Amy Higgins, *Ka-ching!*, MACHINE DESIGN, Jan. 9, 2003, at 75.

134. *See supra* notes 126-128 (explaining the difficulty in calculating payout).

135. *Id.*

136. FRIEDMAN, *supra* note 33, at 298.

137. John Grochowski, *Video Slots Take Sting out of a Losing Night*, CHI. SUN-TIMES, Oct. 6, 2000, at 1; *see also* HANNUM & CABOT, *supra* note 103, at 63, 71-72 (discussing the payout distributions for three slot machines with dramatically different hit percentages but nearly identical hold percentages).

138. FRIEDMAN, *supra* note 33, at 298.

139. HANNUM & CABOT, *supra* note 103, at 71.

140. *See, e.g.*, STEVE BOURIE, AMERICAN CASINO GUIDE 36 (2003 ed.) (detailing an interview of Tom Reale, Director of Slot Operations at the Sands in Atlantic City). Reale states that his casino has about three dozen machines "located in a particular area and . . . clearly marked as an advertisement" that have a hold percentage of less than 2%, even though 90% of the quarter machines in the casino are set to have an hold percentage of about 9%, or more than four times as much. *Id.*

141. LARRY MAK, SECRETS OF MODERN SLOT PLAYING 7 (3d ed. 2001).

also leaves the possibility of payback percentages as low as the legal minimum, which in Nevada is 75%.[142] Other advertising is even more vague.[143] For example, casinos "advertise they have 'looser slots' than their competitors down the street."[144] Clearly, this is intended to imply that the slot machines have a generous pay-out rate, or even the best pay-out rate locally, but this advertising is so vague that if called on the accuracy of it, the casino operator could easily defend the advertising as mere "puffing,"[145] as it is a difficult claim to prove or disprove.[146]

Although casinos appear eager to claim the mantle of having "the loosest slots in town," they appear significantly less interested in advertising the exact hold percentages of their slots on a general basis.[147] From the time of the legalization of casino gambling until the year 2000, casinos in New Jersey were barred by state regulation from advertising the hold percentage or payback percentages of their slot machines.[148] Casinos had lobbied to retain this restriction, because it prevented them from having to compete with each other in terms of price of their products.[149] When the U.S. Supreme Court subse-

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142. NEV. ADMIN. CODE ch. 14, § 14.040(1) 9 (2002).

143. One casino abruptly changed its advertised payback rate from 98% to 94%. John Grochowski, *Post-Cruising Boats Use Same Payback*, CHI. SUN-TIMES, Oct. 8, 1999, at 25. Apparently, the 98% payback referred only to a "single small bank of $1 slot machines," while the 94% applied to all of the casino's machines in two locations in the aggregate. *Id.*

144. Laura Watt, *Seniors' Buck Stops at Casinos*, DENV. POST, Apr. 30, 2000, at E01. "'Loosest slots' is industry jargon for slot machines with the most generous jackpot payouts to players." Rick Alm, *Harrah's Grabs Largest Kansas City, Mo., Casino Market Share in November*, KNIGHT-RIDDER TRIB. BUS. NEWS, Dec. 13, 2000, at 2.

145. CABOT, *supra* note 115, at 91. Casinos are not completely free to engage in excessive puffery. For instance, Sam's Town, a Nevada casino, ran an advertisement declaring, "Figures released by the Gaming Control Board confirm what smart players already know that, on average, the slots at Sam's Town are much looser than those found on the Strip or Downtown Las Vegas." Jeff Simpson, *Sam's Town Investigated: Regulators question loose-slot ads*, LAS VEGAS REV.-J., Apr. 14, 2001, at 3D. This advertisement caused Nevada gaming regulators to initiate an investigation of its veracity, because the Nevada Gaming Control Board, unlike its Illinois counterpart, does not release casino by casino statistics on the hold percentages of slot machines, apparently preferring to keep consumers in the dark as to where the "loosest slots in town" are. *Id.*

146. David Flaum, *Sheraton Rejiggering Slots to Boost Payoffs, Business; Gambit Follows Dip in Earnings*, COM. APPEAL (Memphis, TN), Dec. 14, 2001, at C1 (quoting Eric Hausler, an analyst for Bear Stearns & Co.).

147. *See* Michael J. Fishman & Kathleen M. Hagerty, *Mandatory Versus Voluntary Disclosure in Markets*, 19 J.L. ECON. & ORG. 45, 46 (2003) (arguing that sellers are unlikely to voluntarily disclose information about their products when the portion of customers who can understand the disclosures is low).

148. Patrick Jenkins, *New Jersey Lifts Outdated Ban on Casino Slot Ads*, KNIGHT-RIDDER TRIB. BUS. NEWS, July 7, 2000, at 1.

149. The Associated Press, *State Will Allow Casinos to Advertise Their Odds*, THE REC. N. N.J., June 17, 2000, at A14.

quently overturned some restrictions of gambling advertising in states where the gambling itself was legal,[150] New Jersey regulators concluded that their ban on slot machine payback percentages was also constitutionally suspect and rescinded this restriction.[151] Many in the industry worried that lifting this restriction would cause a price war among the casinos in Atlantic City, in which they would advertise slot machine payback percentages favorable to the consumer in an effort to gain a greater market share.[152] One casino executive stated that lifting these restrictions "could make the industry that much more competitive and could start an odds war."[153] This price war never materialized, the slot machine payouts for a six-month period rose in line with the industry's historical practice and only a few casinos actually advertised their percent returns.[154] If casinos are loath to reveal their average slot machine hold percentages, they are even less apt to reveal the hold percentages on specific machines.[155]

In addition to the limited information provided by casino advertising, some information is publicly available regarding the general hold percentages of various casinos.[156] Several states provide some information regarding electronic gaming machine payback percentages, though rarely in a form useful to consumers.[157] For example, the state of Illinois has published monthly reports of its casino industry, including the aggregate adjusted gross receipts to handle ratio of various denominations of slot machines for various casinos around the State.[158] The information has been presented in a manner difficult for a consumer to understand, referring, for example, to the "EGD

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150. Greater New Orleans Broad. Ass'n v. United States, 527 U.S. 173, 176 (1999).

151. Jenkins, *supra* note 148, at 1.

152. Associated Press, *supra* note 149.

153. *Id.*

154. Joe Weinert, *Atlantic City Payout War Never Materialized*, LAS VEGAS REV.-J., May 1, 2001, at 3D. According to a high-ranking officer in a major casino operation, "Based on our experience in other jurisdictions, quoting odds is not a defensible competitive strategy. If you get into a battle with a competitor, no one wins." Jenkins, *supra* note 148, at 1 (quoting Timothy Wilmot, eastern division president of Harrah's Entertainment, Inc.). Michael Pollock, publisher of MICHAEL POLLOCK'S GAMING INDUSTRY OBSERVER, noted, "You don't see a lot of odds advertising in Las Vegas, particularly among the larger properties, because it's not a way to advance your brand or really gain permanent healthy market share." *Id.*; *see also* Lisa Monti, *If Those Casino Ads Touting Loose Slot . . .* , ASSOCIATED PRESS POL. SERV., Mar. 30, 1997, at 3 (reporting that a casino official expressed a common industry attitude when he stated that no useful goal is achieved by advertising pay-backs).

155. AVERY CARDOZA, SECRETS OF WINNING SLOTS 75 (1998).

156. *See infra* notes 158-171 and accompanying text (describing the publicly available, but unhelpful, information on hold percentages).

157. *Id.*

158. Examples of these monthly reports can be found at the Illinois Gaming Board web page at http://www.igb.state.il.us/revreports (last visited Jan. 6, 2004).

AGR to Handle Percentages," which may mean little to novice play-ers.[159] As of 2003, the State of Indiana provided the "coin in" and "win" amounts for various casinos, but did not include a calculation of the average payback percentage or hold percentage, forcing a con-sumer to do the calculations.[160] By comparison, Nevada, the gaming capital of the United States, does not break down the information it provides the public by casino, and instead has only noted the average payback ratios for all of the casinos in a region, such as North Las Vegas or the Las Vegas Strip, so as to minimize the price-based compe-tition among adjacent casinos.[161] Nevada has even refused to identify publicly to which geographical market any particular casino is assigned.[162]

This state-provided information is further disseminated in a more consumer friendly manner in the popular press.[163] Gaming magazines, both local and national, attempt to track which casinos and which gaming locations are offering the best payback percentages on the various denominations of machines.[164] Annual casino guides also include recent information on payback percentages.[165]

For several reasons, a gambler should be wary of trusting even the state-provided information, limited as it is, or the popular guides or articles that depend on that information, to indicate accurately the price of slot machines.[166] First of all, the state-provided data has lumped slot machines together with video poker machines, which typ-ically provide a higher return to players than slot machines, thus rais-

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159. *See* ILLINOIS GAMING BOARD, MONTHLY RIVERBOAT CASINO REPORT, FEBRUARY 2003, at 6, *available at* http://www.igb.state.il.us/revreports/igb6022003.pdf (last visited Jan. 6, 2004).

160. *See* INDIANA GAMING COMM'N, SUMMARY OF WAGERING AND ADMISSION TAX AS RE-PORTED FOR FEBRUARY 2003, *available at* http://www.in.gov/gaming/reports/revenue/ 2003-02-Revenue.html (last visited Jan. 6, 2004). If a consumer studies such a report with a calculator in hand, she can discern which casinos provided the best odds to electronic gaming machine players on average. John Grochowski, *Gaming Report Reveals Much about State Boats*, CHI. SUN-TIMES, Nov. 24, 2000, at 27.

161. Jeff Simpson, *Different Payouts for Different Places*, LAS VEGAS REV.-J., June 15, 2002, at 1D; *see also* NEVADA GAMING REVENUES CALENDAR YEAR 2003 ANALYSIS, *supra* note 37 (noting the percentage of total win growth on slot machines from 1999-2000).

162. Simpson, *supra* note 161.

163. *See, e.g.*, Grochowski, *supra* note 143 (discussing the payback percentages at various casinos).

164. FRANK SCOBLETE, BREAK THE ONE ARMED BANDITS 49 (1994). For an example of a chart attempting to list the average payback percentages of many casinos throughout the United States, see MAK, *supra* note 141, at 8-10, *reprinted from* CASINO PLAYER magazine.

165. *See* BOURIE, *supra* note 140 (containing sections on each state and noting the infor-mation which is publicly available concerning payback percentages of slot machines in each state).

166. Grochowski, *supra* note 31.

ing the average return.[167] This failure to separate the two types of games gives slot players an artificially reduced perception of average slot costs.[168] Furthermore, the information that states provide is usually at least a month old or more and does not reflect any recent changes made by casinos.[169] The state does not provide any information about the payback percentages of specific machines, so even if a gambler goes into a casino with the lowest hold percentage, she may still unwittingly play a machine with a hold percentage well above average.[170] As one gambling columnist noted, "The statistics are an imperfect road map to the highest paying slots. But they're the only map we have."[171]

This minimal provision of specific, accurate, and timely price information, however, is still far more comprehensive than that which can be found regarding gaming machines at most Indian casinos—a rapidly expanding "industry expected to do more than $13 billion in business [in 2003]."[172] Indian tribes can engage in "Class III," casino-style gaming only after successfully negotiating a compact governing how the tribal casinos will be regulated with a state.[173] Only one of the top gambling states, Connecticut, requires its Indian casinos to provide any public information regarding the payback ratios of their slot machines.[174] Connecticut's information, however, is not broken down by denomination of slot machine.

Some states will not even tell gamblers whether Indian casinos have agreed to a minimum hold percentage.[175] In California, one of

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167. *Id.*

168. *Id.*

169. *Id.*

170. *Id.*

171. *Id.*

172. Rick Green, *Casinos Want High(er) Rollers*, HARTFORD COURANT, Feb. 23, 2003, at L8. Indian gaming is growing at a rapid rate; the "$9.7 billion generated in 2000 represented a more than two thousand percent increase since the Indian Gaming Regulatory Act (IGRA) was passed in 1988." K. Alexa Koenig, *Gambling on Proposition 1A: The California Indian Self-Reliance Amendment*, 36 U.S.F. L. REV. 1033, 1034 (2002).

173. *See* Kathryn R.L. Rand, *There Are No Pequots on the Plains: Assessing the Success of Indian Gaming*, 5 CHAP. L. REV. 47, 52 (2002).

174. Paul Pringle, *Players at Indian Slots Have No Clue on Payout*, L.A. TIMES, Feb. 10, 2003, at B1; *see also, e.g.*, CONN. DIV. OF SPECIAL REVENUE, MOHEGAN SUN CASINO SCHEDULE OF SELECTED VIDEO FACSIMILE/SLOT MACHINE DATA FOR THE PERIOD OCTOBER 1, 1996 THROUGH NOVEMBER 30, 2003, *available at* http://www.dosr.state.ct.us/PDFFolder/Mohlt1103.pdf (last visited Jan. 6, 2004); *see* CONN. DIV. OF SPECIAL REVENUE, FOXWOODS CASINO SCHEDULE OF SELECTED VIDEO FACSIMILE/SLOT MACHINE DATA FOR THE PERIOD JANUARY 1, 1993 THROUGH NOVEMBER 30, 2003, *available at* http://www.dosc.state.ct.us/PDFFolder/FoxH1103.pdf (last visited Jan. 6, 2004).

175. The lack of disclosure in Indian casinos leads to ominous announcements in popular gaming publications. *See, e.g.*, BOURIE, *supra* note 140, at 208 ("According to officials at

the fastest growing casino markets,[176] the casinos are not even re-
quired to have a minimum payout, let alone disclose it.[177] Addition-
ally, no governmental agency monitors claims about the casinos'
slots.[178] As a result, the slot machines available in California casinos
are likely much more expensive than their Nevada counterparts.[179]
While Nevada slot machines have hold percentages of 10% or less,
perhaps as little as 3%, California casinos' hold percentages have been
estimated to be as high as 30%—or up to ten times as much as many
Nevada machines.[180] Worse yet, it appears that the compacts that Cal-
ifornia has negotiated with its various Indian tribes forbid the State
from providing any information that it discovers about the payout
rates of the slot machines in Indian casinos, even when required to do
so by law.[181] This utter lack of information is especially troubling
given how quickly the California casino industry is growing, with reve-
nue increasing from $1.5 billion in 1999 to "estimates ranging from $5
billion to more than $8 billion a year [in 2003]."[182] According to one
knowledgeable observer, "California in the very near future will be the
gambling capital of the world—not of the U.S.—of the world."[183]

How desperate gamblers are for accurate slot price information
and how difficult that information is to obtain can be seen in the at-
tempt to pierce the secrecy surrounding slot prices that was under-
taken by Michael Shackleford, a Las Vegas-based gaming consultant

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the Kansas State Gaming Agency the terms of the state's compacts with the tribes regarding
the minimum payback amounts on their machines are not a matter of public record and
no information can be released.").

176. While California had in 2003 an estimated 45,000 slot machines in Indian casinos,
"a major expansion of tens of thousands more slot machines" is being considered. Green,
supra note 172.

177. Dickey, *supra* note 24.

178. *Id.*

179. *See id.*

180. *Id.*

181. Section 7.4.3(a) of the Model Compact provides, "Notwithstanding any other provi-
sion of California law, all information and records that the State Gaming Agency obtains,
inspects, or copies pursuant to this Gaming Compact shall be, and remain, the property
solely of the Tribe . . . ." Section 7.4.3(b)(i) adds, "The State Gaming Agency will exercise
utmost care in the preservation of the confidentiality of any and all information and docu-
ments received from the Tribe, and will apply the highest standards of confidentiality ex-
pected under state law to preserve such information and documents from disclosure." *See*
California Model Tribal-State Gaming Compact, *available at* http://www.cgcc.ca.us/gov
site/msdocs/press_release_2003/Santa_Isabel_Compact.doc (last visited Dec. 11, 2003).

182. Liz Benston, *Initial Fears of Local Casinos Losing Revenue Appear to Be a False Alarm,*
LAS VEGAS SUN, Mar. 2, 2003, at 1.

183. *Id.* (quoting former California Lt. Gov. Leo McCarthy, who served as a member of
the National Gambling Impact Study Commission).

who operates a gambling web page.[184] Shackleford claims that a "mole in the industry" provided him with "par sheets" for certain nickel slot machines produced by two manufacturers.[185] From the par sheets, one could supposedly match the payback percentage programmed into some machines to certain patterns of symbols that appear on the reels of those machines.[186] Shackleford used the sheets in an attempt to determine the payback percentage of some machines in various Las Vegas casinos and published his results.[187] While a slot manufacturer admitted that someone with its specification sheets could discover the payout percentages of individual machines, it also claimed that Shackleford's survey was not "100% accurate."[188] Critics are of mixed opinions as to the validity of Shackleford's results.[189] This difficulty of accurately discovering the average price of Las Vegas slot machines, even by the most sophisticated and determined researcher, as well as the wide public notice his efforts received, demonstrates both that there is great interest in the true cost of slot machines and that this information is not being provided to the public.[190]

VI. MANY GAMBLERS, INCLUDING PROBLEM AND PATHOLOGICAL GAMBLERS, WOULD LIKELY USE AND BENEFIT FROM GAMBLING PRICE INFORMATION IF IT WERE PROVIDED EFFECTIVELY

While states rake in their share of earnings from gamblers, they should also give the gamblers tools to regulate their gambling and

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184. *See* David Flaum, *Sheraton Slots Atop List of Nickel Video Payouts; Tunica Ranking Plays Loose With Data, Critics Say*, COM. APPEAL (Memphis, TN), Sept. 15, 2002, at G1.

185. *Id.*

186. *Id.*

187. Jeff Simpson, *Gambling: Turning 'em Loose*, LAS VEGAS REV.-J., May 19, 2002, at 1F, *available at* 2002 WL 6875155.

188. Jeff Simpson, *Specifications, Computing Help Crack Payoff Code*, LAS VEGAS REV.-J., May 19, 2002, at 1F, *available at* 2002 WL 6874959.

189. Flaum, *supra* note 184. Even Shackleford admits that he would have liked a larger sample size, and that his results would probably not apply to all of the slot machines available in the casinos he researched. *See* The Associated Press, *Slots That Leave You Smiling*, CHI. SUN-TIMES, June 9, 2002, at 8; Flaum, *supra* note 184.

190. Casinos are typically required to disclose to gamblers the payoff amount if a slot machine shows a specific winning combination. For example, Nevada's gaming regulations require that a slot machine have an award card displayed at all times that "must accurately state the award that will be paid . . . when the player obtains a specific win." NEV. ADMIN. CODE ch. 2, § 2.060 (2003). Furthermore, any gaming device submitted to the gaming commission for approval must display the rules of play and payoff schedule. *Id.* § 14.040(4). Telling a consumer the payoff for a specific win or the payoff schedule for all of the possible ways to win without also informing the consumer of the odds of each possible win gives the consumer the illusion that the information is complete and accurate.

avoid excessive gambling. An important tool for both recreational and problem gamblers would be accurate price information about the available forms of gambling.

A. Informational Regulation of Gambling

Requiring casinos to disclose hold percentages would be a form of informational regulation—regulation designed to provide effective information about the true risks and costs to aid individual decision-makers.[191] A system of informational remedies differs from both a command and control regulatory structure, wherein a regulatory body attempts to govern the decisions with its rule making authority, and a laissez-faire system, which provides little governmental regulation.[192] Cass Sunstein notes that "informational regulation, or regulation through disclosure, has become one of the most striking develop-ments in the last generation of American law."[193]

Informational remedies simultaneously maximize the liberty of individuals to decide for themselves while promoting economic effi-ciency.[194] Such remedies promote economic efficiency by limiting the market failures that can be caused by insufficient or too expensive information or by informational asymmetry between the parties to a transaction.[195] In addition, informational remedies encourage eco-nomic efficiency by forcing parties who profit from consumers' igno-rance to provide information to consumers who have no other cost-effective method of obtaining this information.[196] This effect is par-ticularly important in situations where such information would dimin-

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191. *See* Cass R. Sunstein, *Informational Regulation and Informational Standing: Akins and Beyond*, 147 U. PA. L. REV. 613, 619 (1999). This form of informational regulation is merely a subset of the total forms identified by Sunstein, who also includes the forced disclosure of the release of toxic chemicals by private industry as a political check on the industry's behavior, and governmental release of information to allow the public to monitor govern-mental decisions regarding, for example, the environment. *Id.* at 614.

192. Cass Sunstein, *Informing America: Risk, Disclosure, and the First Amendment*, 20 FLA. ST. U. L. REV. 653, 658-61 (1993) (arguing the merits of informational remedies on the grounds of liberty, economic efficiency, and democracy).

193. Sunstein, *supra* note 191, at 613 (italics omitted).

194. Sunstein, *supra* note 192, at 655.

195. "[D]isclosure regulation—at least in theory—increases the freedom of consumers through giving the opportunity to open one's own eyes . . . . With disclosure regulation, consumers have relatively greater freedom to control their financial destiny." Christopher L. Peterson, *Truth, Understanding, and High-Cost Consumer Credit: The Historical Context of the Truth in Lending Act*, 55 FLA. L. REV. 807, 883 (2003). Peterson also notes that disclosure regulation, at least in the credit arena, also provides some protection to consumers from transactions not in their best interest. *Id.* at 884.

196. Sunstein, *supra* note 192, at 656 (noting both consumers' incentive to "'free ride' on the efforts of others" resulting in a lack of information and poor incentives for manu-factures to provide information).

ish the entire market for a particular product, because, in this situation, an individual supplier would not voluntarily reveal the faults in its product.[197]

The federal Truth in Lending Act (TILA)[198] is an obvious precedent for mandating an informational remedy in the gambling industry, as it was designed to solve a similar problem.[199] Because of the complexity of loan transactions, the documents that embody the loans, and the nefarious strategies of some lenders, borrowers were unable to discover the costs of loans or to compare the costs of one loan against the other.[200] To remedy this information shortage among consumers, TILA requires lenders to divulge to borrowers the true costs of loans in a standard format, so that would-be borrowers can shop for loans, compare the costs of different loans offered by the same or different lenders, and more accurately discern the true cost of those loans in determining whether to borrow at all.[201] TILA's disclosure system has its flaws, but the overall system of price information disclosure has helped borrowers discover the cost of loans and fostered price competition among lenders.[202]

B.   The Command and Control Approach to the Regulation of Gambling

In the past, states have often taken the patriarchal, command and control approach, determining whether gambling is in the best interests of their citizens and, upon determining that gambling generally was bad for its citizens, banning gambling.[203] This approach has sev-

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197. *Id.* at 656.

198. 15 U.S.C. §§ 1601-1667f (2000).

199. *See id.* § 1601(a) (declaring that TILA's purpose is to "assure a meaningful disclosure of credit terms . . . to protect the consumer against inaccurate and unfair credit billing and credit card practices").

200. "The time had come for lenders to tell the real story about the cost of credit. There was considerable confusion in the marketplace about the terms of credit because lenders did not disclose the details of their transactions in any uniform way." Elwin Griffith, *Searching for the Truth in Lending: Identifying Some Problems in the Truth in Lending Act and Regulation Z*, 52 BAYLOR L. REV. 265, 266 (2000).

201. *Id.* at 268.

202. *See* Jeff Sovern, *Toward a Theory of Warranties in Sales of New Homes: Housing the Implied Warranty Advocates, Law and Economics Mavens, and Consumer Psychologists Under One Roof*, 1993 WIS. L. REV. 13, 39 n.110 (listing various studies that for the most part demonstrate that Truth in Lending's disclosure requirements have increased consumer knowledge of the true cost of mortgages but that Truth in Lending remains flawed); *see also* Peterson, *supra* note 195, at 903 (concluding that, while TILA has not so far "lived up to its potential," the disclosure form of consumer protection may yet prove more useful than other methods).

203. *See supra* notes 8-11 and accompanying text (noting that most states banned gambling up until 1976).

eral flaws.[204] Banning gambling is too often seen as an all or nothing decision.[205] Because it determines whether no gambling is better than gambling generally, this form of state decision-making ignores the possibility that limited or regulated gambling might be better than either freely available gambling or no gambling at all.[206]

Secondly, this command and control method forces the state to make an overall decision on behalf of all of its citizens about the overall costs and benefits of gambling. To attempt this feat, some have tried to ascertain the complete social costs of gambling as well as its social benefit, in order to compare the two.[207] As noted in Part I, currently there is little agreement on what constitutes the social costs of gambling, let alone how exactly to measure these costs, and the personal benefits to gamblers are also not easily measured or factored into the social cost-benefit analysis.[208]

Banning all gambling also ignores the fact that some people will gamble regardless of whether gambling is legal. By banning gambling, the state either forces gamblers to leave the state to gamble or forces them into the black market for gaming.[209] Enforcement of gambling prohibition is often lax, eviscerating the benefits that it is intended to achieve.[210] The state that bans gambling not only loses gambling taxes, it also provides a ready source of money to organized crime, which profits from running numbers games and illicit casinos.[211] Such black market gambling opportunities appear not only wherever gambling is banned, but also where types of gaming that gamblers find particularly appealing are banned.[212] Thus, even in states where casino games are readily available, but where it is illegal

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204. *See* WILLIAM N. THOMPSON, LEGALIZED GAMBLING 15 (1994) (asserting that "prohibition efforts have at times entered the realm of the ridiculous").

205. *See id.* (discussing several state and city gambling prohibitions).

206. *See* Shaffer & Korn, *supra* note 48, at 178 (asserting that "[g]ambling holds potential direct and oblique benefits for both the individual and the community").

207. *See, e.g., supra* notes 62-63 and accompanying text (detailing the costs and benefits of gambling).

208. *See supra* note 65 and accompanying text (discussing the difficulty in identifying and defining the costs and benefits of gambling).

209. Reuven Brenner, *Prohibition of Gambling is Costly and Does Not Achieve Its Intended Benefits, in* LEGALIZED GAMBLING, *supra* note 41, at 176-79.

210. *Id.* at 179-81.

211. ROSE, *supra* note 8, at 171-72.

212. *See* THOMPSON, *supra* note 204, at 53 (noting that "[b]y their very nature, legitimate gambling operations must be capable of satisfying the particulars of public demand or they will serve only to stimulate more of the activity they are designed to eradicate").

to gamble on the outcome of college athletics, bookies operating outside the law do extensive, untaxed, and unregulated business.[213]

This argument has been countered by the observation that legalized gambling has not eliminated illegal gambling, and some contend that it may even contribute to illegal gambling, as it encourages organized crime figures to move to a state where gambling is legal.[214]

A blanket ban presumes either that no gambling is beneficial, that it is all tainted somehow or will lead to bad effects that outweigh the benefit of gambling, or that there is no effective way of sorting out the beneficial from the harmful gambling, and so a blanket ban is justified.[215] Such an analysis ignores the argument that individuals are generally better judges of what is in their best interests, and presumes that the state can decide better than its citizens whether individual gambling transactions should take place, thus constituting paternalism of a fairly rigorous kind.[216]

C. *The Laissez-Faire Approach to the Regulation of Gambling*

The opposite of command and control regulation is the laissez-faire approach, where the state relies on the parties to gambling transactions to regulate themselves and each other, to the extent that they can or want to do so.[217] Laissez-faire regulation would not inevitably

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213. NAT'L GAMBLING IMPACT STUDY COMM'N, NATIONAL GAMBLING IMPACT STUDY COMMISSION FINAL REPORT 3-10 (1999), *available at* http://govinfo.library.unt.edu/ngisc/reports.finrpt.html (last visited Dec. 11, 2003) [hereinafter *NGISC Final Report*].

214. *See* Rychlak, *supra* note 4, at 348-49; Theresa A. Gabaldon, *John Law, with a Tulip, in the South Seas: Gambling and the Regulation of Euphoric Market Transactions,* 26 J. CORP. L. 225, 260 (2001); *see also* Lester B. Snyder, *Regulation of Legalized Gambling: An Inside View,* 12 CONN. L. REV. 665, 666 (1980).

I. Nelson Rose goes so far as to assert, "No serious student of gambling today believes that legalized gambling hurts organized crime . . . . In fact, there is evidence that the introduction of a new legal game increases the number of all bettors, including an increase in the number of people betting illegally." ROSE, *supra* note 8, at 9.

215. *See* ACIL CONSULTING, BENEFITS AND COSTS OF GAMBLING: A FRAMEWORK FOR ANALYSIS 6 (July 16, 1999), *available at* http://www.acilconsulting.com/au/pdf/Supplementary_Submission.PDF (last visited Jan. 6, 2004) (acknowledging that while "many commentators and researchers . . . consider gambling to be all cost and no benefit . . . [i]gnoring benefits is illogical and absurd").

216. Thaddeus Mason Pope distinguishes two forms of paternalism: paternalism that seeks to prevent harm to a third party versus paternalism that seeks to prevent harm to the very party whose liberty is restricted, calling the former "the harm principle" and the latter paternalism. Thaddeus Mason Pope, *Balancing Public Health Against Individual Liberty: The Ethics of Smoking Regulations,* 61 U. PITT. L. REV. 419, 427-31 (2000). He further divides paternalism into hard and soft paternalism, labeling soft paternalism that which seeks to protect an individual who lacks adequate information, maturity, or freedom to make effective decisions herself. *Id.* at 429-31.

217. THOMPSON, *supra* note 204, at 16. Thompson calls this approach "government toleration" and notes that most charity gaming in the United States is self-regulated, while the

lead to completely unregulated behavior, as many parties would seek some private third party to proctor the gambling transaction.[218] A complete laissez-faire approach to gambling would be, and has been, detrimental to many gamblers.[219] An example of nearly complete laissez-faire regulation of gambling occurred in Nevada after World War II, when organized crime effectively ran many of the Las Vegas casinos.[220] Nevada did not even have a specific regulatory agency to supervise casinos until 1955, and even when it established a Gaming Commission to oversee a Gaming Control Board's regulatory enforcement, the Gaming Commission was, for twenty years, "little more than a rubber stamp."[221] Organized crime was drawn to Las Vegas because of the massive amounts of cash with which casinos dealt each day, making the skimming of money from casinos' counting rooms a lucrative, albeit illegal, enterprise.[222]

The flaws in laissez-faire control of gambling can be seen in the area where there is least regulation of gambling in the United States, Internet gambling.[223] Although this genre of gambling is still in its infancy, and is still experiencing the rapid growth of a new industry, troubles from the lack of regulation are already appearing.[224] A new casino website can be purchased for as little as $5000 in Canada.[225] To create a sense of trust in their customers, some Internet casinos purport to offer accountants' reports certifying the payout percent-

Indian Gaming Regulatory Act, passed in 1988, allows self-regulation by tribes for "traditional Indian games." *See* Indian Gaming Regulatory Act, 25 U.S.C. §§ 2701-2721 (2000).

218. *See* Guy Calvert, *Gambling America: Balancing the Risks of Gambling and Its Regulation*, POLICY ANALYSIS, June 18, 1999, at 1, *available at* http://www.cato.org/pubs/pas/pa349.pdf (last visited Jan. 6, 2004) (arguing that without governmental regulation, private parties would seek third party supervision of their gambling transactions, while governmental regulation invites corruption).

219. *See* TIMOTHY L. O'BRIEN, BAD BET: THE INSIDE STORY OF THE GLAMOUR, GLITZ, AND DANGER OF AMERICA'S GAMBLING INDUSTRY 30-33 (1998) (discussing the pre-regulation corrupt practices of Las Vegas casino owners).

220. *Id.* In 1980, Alfred N. King, along with the Department of Justice Organized Crime and Racketeering Section, noted that "Las Vegas gambling was conceived in sin and raised in degradation. Time after time, mob influence or skimming in the Las Vegas casinos has surfaced, yet the Nevada Gaming Control Commission has done little to rectify the situation." Alfred N. King, *Public Gaming and Public Trust*, 12 CONN. L. REV. 740, 758 (1980).

221. O'BRIEN, *supra* note 219, at 32.

222. *Id.* at 31.

223. *See* Joseph M. Kelly, *Internet Gambling Law*, 26 WM. MITCHELL L. REV. 117, 134-50 (2000) (recounting how federal legislators have introduced efforts to prohibit, but not regulate, Internet gambling).

224. *See* NGISC Final Report, *supra* note 213, at 2-16. The report identifies several issues specifically raised by Internet gambling. *Id.* For example, the Internet "provides the highest level of anonymity for conducting gambling to date," which exacerbates the existing problems of underage and pathological gambling. *Id.*

225. *Companies Cash in on Cyber-betting*, TORONTO STAR, Oct. 6, 2001, at S07.

ages of their various games.[226] The cause for potential distrust is obvious. Any business so inexpensive to enter can also be exited easily, once it has its hands on sufficient assets of its customers. Unregulated Internet casinos could become massive Ponzi schemes, paying out money long enough to generate sufficient trust from their customers, permitting casinos to accumulate large amounts of money deposited for wagers before suddenly going out of business.[227]

D.   The Current "Smoke and Mirrors" Regulation of Gambling

The states most associated with gambling have created a hybrid of command and control and laissez-faire regulation.[228] States like New Jersey appear to regulate each aspect of casinos' gaming operation, yet fail utterly to protect consumers in important respects.[229] A state's apparently extensive regulatory apparatus seems designed to protect consumers in the casino industry and is intended to maximize consumer trust in the gaming industry.[230] If the consumers were told that the system was completely laissez-faire, they might gamble less because of their concern about being cheated by the casinos.[231] However, because the casinos project an aura of being hyper-regulated, consumers

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226. See what purport to be "special reports" by the South African office of Price-WaterhouseCoopers regarding the payout schedules of Orbital Casino, an Internet casino, at http://www.orbitalcasino.com/pwc/index.asp?VT=224007185&EventID=3228 (last visited Jan. 6, 2003). Of course, any online casino could also easily generate purported "special reports" authored by obscure branch offices of accounting firms.

227. See generally Kelly, supra note 223, at 121-71 (discussing means of regulating Internet gambling, including the "wait and see" and the "regulate and tax" approaches).

228. See Snyder, supra note 214, at 666 (alleging that "[s]tate statute books are replete with laws that are not seriously enforced" and that despite a "declared unanimity for controls, state gaming boards and commissions and other state agencies are, for the most part, handmaidens and protectors of the industry they are legally charged with regulating in the public interest").

229. ROSE, supra note 8, at 31 (discussing the lack of gaming regulations in Atlantic City designed to protect the players' interests).

230. For example, Nevada's Public Policy of the State Concerning Gaming asserts, "Public confidence and trust can only be maintained by strict regulation of all persons, locations, practices, associations and activities related to the operation of licensed gaming establishments [and] the manufacture, sale or distribution of gaming devices and associated equipment." Nevada Gaming Control Act, NEV. REV. STAT. 463.0129(c) (2003). New Jersey states, in a recent report, "[t]he commission establishes the rules of each game. In this way, every casino plays by the same rules and public confidence in gaming is enhanced." N.J. CASINO CONTROL COMM'N, CASINO GAMBLING IN NEW JERSEY 13 (Jan. 1998), available at http://www.state.nj.us/casinos/njccc.pdf (last visited Jan. 6, 2004).

231. Cabot and Hannum assert that "the well being of the entire [gambling] industry is dependent on the public perception that it is fair and honest." Cabot & Hannum, supra note 125, at 334.

may be less wary of their own protection, feeling that the state is watching over them.[232]

In fact, the state itself has a great interest in ensuring that gamblers spend their money in casinos, because the state obtains a large share of the proceeds from gambling.[233] Much of states' extensive regulation is designed to ensure that casinos do not skim off some of their winnings and deny the states their share of the money.[234] Much of the remaining regulation is designed to protect casinos, rather than their customers, as casinos have lobbyists to ensure that their voices are heard, while gamblers have not organized to protect their interests.[235]

The primary consumer protection for gamblers, apart from rules such as self-exclusion programs and bet maximums designed to aid problem gamblers, is in rules requiring casinos to be fair and honest toward gamblers. Yet even these requirements are designed to provide too little protection to gamblers. An "honest" game is one in which the game is truly random and the casino cannot unfairly affect the outcome of the game.[236] Gaming regulators check for honesty, for example, by making sure that computerized slot machines meet exacting confidence standards for randomness.

"Fairness," on the other hand, refers to how much advantage the casino has over gamblers and whether the casino's games have an appropriate or excessive hold percentage.[237] The easiest way to ensure the fairness of a game would be to force casinos to disclose their hold percentages and allow their customers to decide if the prices of the game are fair. Instead, states generally merely mandate maximum hold percentages. However, the maximums they allow are typically so high, and so much higher than the average hold percentages in the

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232. "[C]asinos are seen as institutions as large and as powerful and as regulated as banks . . . ." ROSE, *supra* note 8, at 20.

233. In its 2000 report, the New Jersey Casino Control Commission noted that, "[s]ince the inception of casino gaming, the Revenue Unit has collected $4.7 billion in Gross Revenue Tax, $952 million in license fees, $10 million in fines, and $34.5 million in Atlantic City Fund contributions." N.J. CASINO CONTROL COMM'N, 2000 ANNUAL REPORT 8, *available at* http://www.state/nj.us/casinos/ccc2000annrpt.pdf (last visited Jan. 6, 2004).

234. *See generally* Richard A. Meyer, *Accounting for the Winnings—Auditing Gambling Casinos*, 12 CONN. L. REV. 809, 809 (1980) (describing the difficulty of auditing casinos); *see also* CABOT, *supra* note 115, at 131 (discussing the auditing and accounting function of casino regulation to ensure the collection of taxes).

235. ROSE, *supra* note 8, at 31. Rose cites a 1983 study of Atlantic City gaming regulations in which the study's authors concluded that all of the new regulations benefited the casinos, not the players. *Id.*

236. Cabot & Hannum, *supra* note 125, at 334-35.

237. *Id.* at 335.

state, that the hold percentage limits give gamblers too little protection. For example, a gambler playing a twenty-five dollar slot machine in Nevada and expecting a hold percentage near the state average of 3.39% would naturally feel cheated to learn the hold percentage of her machine was the state maximum 25%, or more than seven times as expensive as she expected.[238]

Given their interest in revenues from gambling, it is no coincidence that states do little to ensure that consumers have adequate information needed to make informed decisions regarding the true costs of the games available in casinos. This lack of consumer protection leaves casinos free to conceal the true costs of slot machines and other games.[239]

E. Informational Remedies Would Aid Recreational Gamblers

Recreational gamblers would benefit from informational disclosures by being able to compare the costs of different gambling options and determining which offers the best value for the gambler.[240] As states open up legal gambling, they abdicate their role in deciding how much gambling should occur and instead leave this decision to individual consumers.[241] However, individual gamblers cannot make an informed decision without accurate price information as that information is crucial to the comparison of different opportunities for the gambler.[242] Whether a gambler would choose to play the slot machines or to play roulette or even gamble at all might depend on which game offered a lower house advantage.[243] Whether a gambler would prefer to play at a certain casino or a different one further down the street would often be affected by which casinos offer the

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238. *Id.*

239. DARWIN ORTIZ, DARWIN ORTIZ ON CASINO GAMBLING 27 (1986). Ortiz notes, "Casinos are very clever about disguising the house percentage. But it is there in every game." *Id.*

240. *See supra* notes 130-132 and accompanying text (detailing how price disclosure would be useful to gamblers).

241. *See* THOMPSON, *supra* note 204, at 16 (explaining the "government toleration" approach to gambling).

242. *See* Peterson, *supra* note 195, at 883. Peterson notes:
   Without accurate information about the quality and especially the price of any good, no person can minimize their opportunity costs, since they cannot compare the value of that product to their next best option. Thus, in a policy system of private decisionmaking, where individuals act without accurate cost information, there is no policymaking at all.
Id.

243. *See supra* notes 102-107 and accompanying text (explaining the value in knowing the hold percentage).

lowest hold percentages on their games.[244] Recreational gamblers should be given this information so that they can make rational decisions on whether and how to spend their entertainment dollar and so maximize the efficiency of the gambling industry.[245] As Christopher L. Peterson noted, "[e]fficient market outcomes can only come about as a result of individuals selecting those product options with the lowest opportunity costs."[246] For a market to function efficiently, the parties to exchanges must be sufficiently capable and informed, and their participation in the exchanges voluntary; and if so, the exchanges should be efficient and create a net benefit, even though others might question its value or wisdom. Without price disclosures by casinos, recreational gamblers have no way of determining whether the benefits they receive from playing slot machines outweigh the costs or even which slot machines have the lowest opportunity costs, and so the market functions inefficiently.[247]

Despite casinos' failure to disclose price variations in slot machines, gamblers are still somewhat sensitive to those variations, showing how important price is to gambling consumers.[248] Even though the slot machine price differentials can be determined only very roughly, through personal experience or through word of mouth, there is evidence that regular and local players in Nevada typically play at casinos with lower hold percentages.[249]

F.   Informational Remedies Would Likely Help Pathological and Problem Gamblers

While this informational remedy would benefit recreational gamblers, it likely would also be of special aid to problem or pathological gamblers. A decade ago, it was postulated that, if gamblers could be

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244. *Id.*
245. Peterson, *supra* note 195, at 882.
246. *Id.*
247. To Milton Friedman, the test of whether a transaction benefits both parties is whether the transaction is bilaterally voluntary and informed. *See* MILTON FRIEDMAN, CAPITALISM AND FREEDOM 13 (1962).
248. Eadington, *supra* note 20, at 181.
249. *Id.* Eadington notes:
   Regular and local players play more frequently than tourists, and probably share their experiences more than tourists, and as a result are more price sensitive. Thus, the house advantage tends to be lower for slot machines for casinos that cater to local players than for those that cater to tourists . . . .
Id. Eadington notes that Nevada casinos generally have more competition and lower hold percentages than their Atlantic City counterparts. *Id.* He also notes that American roulette has about twice the hold percentage as European roulette and is unsurprisingly much less popular in the United States than in Europe. *Id.*

induced to consider the actual amount of money that would likely be lost during gambling, they would not gamble as much.[250] Recent studies on the effect of truthful information in a gambling setting have supported this hypothesis and indicate that providing accurate information about the costs and likelihood of losing may help pathological and problem gamblers control their gambling.[251]

Much theoretical work has been done on why people gamble.[252] Even though almost all commercial gambling opportunities are losing propositions for gamblers, a significant percentage of gamblers list "winning money" as an important reason for gambling.[253] Some economists have argued that gambling can be explained by the desire of some individuals to change their economic station in life, and the willingness to take on even risky, somewhat unfair bets at a chance for this change.[254] Others argue that indivisibilities in expenditures and income lead to a willingness to take on risk.[255] In other words, someone with the money or income to buy only half of a car or a house might be willing to risk some of that money to purchase a whole car or house.[256] Or people might play the lottery in hopes of avoiding having to work, or because they have few attractive investment options.[257] Others assert that the goal of gambling is not to maximize expected value or wealth but merely to be entertained.[258] The primary goal of

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250. Griffiths, *supra* note 57, at 101-20.

251. *See infra* notes 282-289 and accompanying text.

252. *See infra* notes 254-261 and accompanying text.

253. Paul H. Delfabbro & Anthony H. Winefield, *Predictors of Irrational Thinking in Regular Slot Machine Gamblers*, 134 J. PSYCHOL. 117, 117 (2000).

254. Friedman and Savage state,

> [I]ncreases in income that raise the relative position of the consumer unit in its own class but do not shift the unit out of its class yield diminishing marginal utility, while increases that shift it into a new class, that give it a new social and economic status, yield increasing marginal utility.

Milton Friedman & L.J. Savage, *The Utility Analysis of Choices Involving Risk*, 56 J. POL. ECON. 279, 298-99 (1948); *see also* Michael Landsberger & Isaac Meilijson, *Lotteries, Insurance, and Star-Shaped Utility Functions*, 52 J. ECON. THEORY 1 (1990) (discussing the economic theory of aversion or attraction to risk).

255. *See* Ng Yew Kwang, *Why Do People Buy Lottery Tickets? Choices Involving Risk and the Indivisibility of Expenditure*, 73 J. POL. ECON. 530, 530 (1965).

256. *Id.*

257. Edward J. McCaffery, *Why People Play Lotteries and Why it Matters*, 1994 WIS. L. REV. 71, 103, 106-07. This effect, McCaffery notes, is especially significant given the information costs imposed in an initial mutual fund or stock investment. *Id.* at 106-07.

258. "Recreational gambling is no less productive than ten-pin bowling, ballroom dancing, or barbershop singing—all group pastimes that people pursue because they enjoy them." David Ramsay Steele, *Gambling is Productive and Rational, in* LEGALIZED GAMBLING, *supra* note 41, at 228. Lloyd Cohen argues that a lottery ticket purchaser is likely not trying to maximize the expected return or marginal utility of her investment, but rather is buying a chance to dream about a life of fabulous wealth. Lloyd R. Cohen, *The Lure of the Lottery,*

many slot machine players may be to play as long as possible on a given sum of money for the excitement of the game rather than any financial return.[259] Players may be seeking arousal, created by their own risk-taking, which would explain why most gambling games are significantly less stimulating when they are not played for money.[260] More controversial is the view that gambling stimulates internal brain chemistry, such as the dopamine system, the body's reward and pleasure network.[261] Despite this theoretical work on understanding why people gamble, until recently there has been only piecemeal research in the treatment of problem or pathological gambling.[262]

One of the most promising and well-documented approaches to understanding and treating pathological gambling is the cognitive approach.[263] According to this approach, pathological gambling is the result, at least in part, of systematic cognitive errors, such as failing to understand the utter randomness of slot machines,[264] and believing that the gambler can somehow control the machine despite its randomness.[265] Many gamblers have been seen to hold the persistent be-

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36 WAKE FOREST L. REV. 705, 716-17 (2001); *see also* WILLEM ALBERT WAGENAAR, PARADOXES OF GAMBLING BEHAVIOR 10-11 (1988) (discussing the amusement value of gambling).

259. Paul Delfabbro, *The Stubborn Logic of Regular Gamblers: Obstacles and Dilemmas in Cognitive Gambling Research*, 20 J. GAMBLING STUD. 1, 12 (2004).

260. Robert Ladouceur et al., *Video Lottery: Winning Expectancies and Arousal*, 98 ADDICTION 733, 734 (2003).

261. According to psychiatrist Dr. Gregory Berns,
Winning in gambling can also hijack the dopamine system . . . . [C]ompulsive gamblers seem to have vulnerable dopamine systems. The first time they win, they get a huge dopamine rush that gets embedded in their memory. They keep gambling, and the occasional dopamine rush of winning overrides their conscious knowledge that they will lose in the long run.
Sandra Blakeslee, *Hijacking the Brain Circuits With a Nickel Slot Machine*, N.Y. TIMES, Feb. 19, 2002, at F1. Recent research suggests that "dopamine is elevated during gambling in a manner that is dependent on both the probability and magnitude of potential reward." Christopher D. Fiorillo et al., *Discrete Coding of Reward Probability and Uncertainty by Dopamine Neurons*, 299 SCI. MAG., Mar. 21, 2003, at 1898, 1901.

262. *See, e.g.*, Louise Sharpe & Nicholas Tarrier, *A Cognitive-Behavioral Treatment Approach for Problem Gambling*, 6 J. COGNITIVE PSYCHOTHERAPY 193, 193 (1992); *see also* Nancy M. Petry & Christopher Armentano, *Prevalence, Assessment, and Treatment of Pathological Gambling: A Review*, 50 PSYCHIATRIC SERVICES 1021, 1021 (1999) (stating that "relatively little effort has been dedicated to identifying and treating" pathological gambling).

263. Francine Ferland et al., *Prevention of Problem Gambling: Modifying Misconceptions and Increasing Knowledge*, 18 J. GAMBLING STUD. 19, 20 (2002).

264. Robert Ladouceur & Dominique Dube, *Monetary Incentive and Erroneous Perceptions in American Roulette*, 34 PSYCHOL. J. HUM. BEHAV. 27, 30 (1997) (stating that "[t]he present results revealed that the majority of individuals have erroneous perceptions of events governed by chance when engaging in gambling activities").

265. Ferland et al., *supra* note 263, at 19, 20. It should be stressed that even the researchers advocating a cognitive approach to problem gambling do not typically assert it as a sole basis, but rather merely one of several bases for problem gambling. *See* Robert B.

lief that they can somehow control random events.[266] This illusion of control is related to the similar defective heuristic of biased attribution, where a gambler believes that her own internal characteristics, such as skill, are responsible for wins, while losses are caused by external factors.[267] A leading theory regarding the cause of problem gambling, the social-cognitive theory, holds that gamblers' erroneous thoughts about randomness and gamblers' inability to control the results of their gambling are at the heart of the problem.[268] Although there is not yet hard proof that erroneous beliefs increase gambling, a significant number of studies at least indirectly support the theory that misperception of control increases the frequency of gambling,[269] and that erroneous beliefs about gambling "may encourage the wagering of higher amounts of money and persistence at gambling despite consistently losing."[270] People have even been shown to gamble more when exposed to others' erroneous verbalizations about gambling.[271]

A common error is the gambler's fallacy, the expectation that a short period of random events should match the longer term distribution of results, so that a player who has lost several times in a row will believe that those losses increase his chances of winning in the near future.[272] Pathological gamblers may also underestimate their losses by systematically recalling more wins than losses.[273] One reason for overestimating wins is the tendency to fixate on absolute frequency, rather than focusing on the ratio of wins to losses. Problem gamblers may think only about how often they have won, ignoring the fact that

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Breen et al., *Cognitive Changes in Pathological Gamblers Following a 28-Day Inpatient Program*, 15 PSYCHOL. ADDICTIVE BEHAV. 246, 246 (2001) (noting that environmental and social factors are equally important in contributing to the acceptability and meaning of gambling to the gambler).

266. Anthony D. Miyazaki et al., *Promoting and Countering Consumer Misconceptions of Random Events: The Case of Perceived Control and State-Sponsored Lotteries*, 20 J. PUB. POL'Y & MARKETING 254, 255 (2001). However, for a critique of the research into the illusion of control, see Delfabbro, *supra* note 259, at 4-5. Delfabbro concludes that there is a problem in predicting when the illusion of control will occur, as it seems to depend on the context of the gambling. *Id.*

267. Delfabbro, *supra* note 259, at 2.

268. Anne Caron & Robert Ladouceur, *Erroneous Verbalizations and Risk Taking at Video Lotteries*, 94 BRIT. J. PSYCHOL. 189, 189 (2003).

269. Miyazaki et al., *supra* note 266, at 255.

270. Tony Toneatto et al., *Brief Report: Cognitive Distortions in Heavy Gambling*, 13 J. GAMBLING STUD. 253, 265 (1997); *see also* Caron & Ladouceur, *supra* note 268, at 189.

271. *Id.* at 192.

272. Delfabbro, *supra* note 259, at 2.

273. Alex Blaszczynski & Derrick Silove, *Cognitive and Behavioral Therapies for Pathological Gambling*, 11 J. GAMBLING STUD. 195, 204 (1995). Delfabbro states that the "availability heuristic refers to the tendency for more salient events (e.g. wins) being more easily remembered than less salient events (i.e. losses)." Delfabbro, *supra* note 259, at 2.

they lost more than they won.[274] Even more dangerous, perhaps, is a gambler's belief that, if she has lost money, she should keep gambling because she is likely to win her losses back, a phenomenon known as "chasing."[275]

These theories of the imperfect heuristics employed by gamblers are buttressed by generalized theories of flawed decision-making.[276] People have "limited computational skills and seriously flawed memories."[277] They "tend to classify small probability events rather crudely as either possible or impossible."[278] In this way, people may act as if it is possible to win the lottery if they buy a ticket, while treating much more likely occurrences, such as being struck by lightning, as so improbable as to be ignored.[279] Other heuristics relied on to make decisions based on risk and uncertainty include the tendency of people to be excessively optimistic about their chances of avoiding an adverse outcome.[280] People are also affected unduly by how information is framed; they will state very different preferences based on apparently minor changes in how a potential choice is described, seeming to prefer options expressed in terms of gains over those expressed in terms of losses, even where the identical information is conveyed in two separate ways.[281]

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274. Mark D. Griffiths, *The Role of Cognitive Bias and Skill in Fruit Machine Gambling*, 85 BRIT. J. PSYCHOL. 351, 354 (1994).

275. John O'Connor & Mark Dickerson, *Definition and Measurement of Chasing in Off-Course Betting and Gaming Machine Play*, 19 J. GAMBLING STUD. 359, 360 (2004). O'Connor and Dickerson distinguish between chasing in a single session, in which many regular gamblers may engage, and chasing on a long term basis between sessions, which is more likely a feature of compulsive gambling. *Id.* at 360.

276. *See* Owen D. Jones, *Time-Shifted Rationality and the Law of Law's Leverage: Behavioral Economics Meets Behavioral Biology*, 95 Nw. U. L. REV. 1141, 1142 n.4 (2001). "Heuristics" are the "supposed rules of thumb" people use to make decisions while "biases" are the errors made by using such rules of thumb, if such errors are made systematically among a study population. *Id.*

277. Christine Jolls et al., *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471, 1477 (1998).

278. Philip J. Cook & Charles T. Clotfelter, *The Peculiar Scale Economies of Lotto*, 83 AM. ECON. REV. 634, 638 (1993) (citing Daniel Kahneman & Amos Tversky, *Choices, Values, and Frames*, 39 AM. PSYCHOLOGIST 341, 345 (1984)).

279. WALSH, *supra* note 104, at 341 (noting that the odds of being struck by lightning are greater than winning "even the easiest lottery").

280. *See, e.g.,* Jon D. Hanson & Douglas A. Kysar, *Taking Behavioralism Seriously: The Problem of Market Manipulation*, 74 N.Y.U. L. REV. 630, 656 (1999). Calling this the "Optimistic bias," Hanson and Kysar state, "[o]ne particular manifestation of this bias is the tendency of people to underestimate their own chance of suffering some adverse outcome even when they accurately state or even overstate everyone else's chance of suffering that same outcome." *Id.*

281. *See id.* at 644-45.

Providing players with accurate information about the true cost of their gambling should help counterbalance these imperfect heuristics.[282] Although some studies of cognitive treatment of gambling have been criticized for having too few subjects and not comparing this treatment to other possible treatments, some critics suggest this approach may be useful.[283]

Several studies have indicated that providing better information to gamblers may help them overcome these defective strategies and gain more effective control over their gambling. A study of lottery play showed that, for those who engage in excessive lottery play because of the misperception that they can control the outcome of their wager, information provided in warning labels can reduce "control-related behaviors" and reduce the purchase of lottery tickets.[284] In another study involving roulette, correct information caused more effective gambling and earlier cessation.[285] A study of punters—those who bet on the horses—concluded that there was a significant negative correlation between the ability to process information and the likelihood of problem gambling.[286] The author of the study concluded that the education of such gamblers should be a priority and that they "must be educated with respect to appropriate betting behavior, and also with respect to sensible [information] processing methods."[287] Recent research regarding whether pathological gambling could be helped by cognitive treatment to "target gamblers' erroneous perceptions of randomness" concluded that its results "suggest that a cognitive treatment can significantly improve pathological gambling."[288] Although "changing attitudes towards gambling may be a process that takes more than a single information session" research

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282. Ferland et al., *supra* note 263, at 20 (citing A. Gaboury & R. Ladouceur, *Evaluation of a Prevention Program for Pathological Gambling Among Adolescents*, J. OF PRIMARY PREVENTION 14, 21-28 (1993)).

283. *See, e.g.*, Petry & Armentano, *supra* note 262, at 1021.

284. Miyazaki et al., *supra* note 266, at 256. The study showed that the warnings were less effective for those people who purchased tickets based on the belief that they were "lucky," however. *Id.*

285. Mark R. Dixon et al., *Examining the Roles of Rule Following, Reinforcement, and Preexperimental Histories on Risk-taking Behavior*, PSYCHOL. REC., Oct. 1, 2002.

286. Mark Solonsch, *An Analysis of Skill in Gambling, in* GAMBLING AND COMMERCIAL GAMING: ESSAYS IN BUSINESS, ECONOMICS, PHILOSOPHY AND SCIENCE, *supra* note 107, at 477.

287. *Id.*

288. Robert Ladouceur et al., *Cognitive Treatment of Pathological Gambling*, 189 J. NERVOUS & MENTAL DISEASE 774, 775, 780 (2001). This study focused on "correction of erroneously perceived links between random events in gambling situations." *Id.* at 775. For a similar study also showing the effectiveness of cognitive and behavioral treatment, see Caroline Sylvain et al., *Cognitive and Behaviour Treatment of Pathological Gambling: A Controlled Study*, 65 J. CONSULTING & CLINICAL PSYCHOL. 727, 727 (1997).

indicates that "an increase in realistic knowledge about gambling can be followed by positive changes in gambling behavior."[289]

To be most effective, any informational remedy designed to aid problem gamblers should likely provide the information to gamblers while they are gambling.[290] It appears that there is a cognitive shift during the gambling process. After researching the beliefs of gamblers during play and outside of play, one researcher concluded that even individuals who recognized the random aspect of gambling outside of play revealed erroneous beliefs about their ability to control or predict the game's result. He found "that two distinctive cognitive sets about gambling can be present in the gambler's mind, one rational outside the game session and an irrational one triggered by the characteristics of the game."[291] Slot machine players who otherwise acknowledge that they have no actual control over the outcome of their wager may over-gamble because of an illusion of control over the machine, despite the irrationality of this belief and the fact that such players know that they generally lose more than they win and expect to lose on whatever machine on which they play next.[292] A study of the verbalizations of slot machine players and other gamblers indicates that even though "subjects correctly perceived the game as being based on luck or chance before and after play," during play, many game related verbalizations indicated erroneous perceptions.[293] A separate study indicated that regular gamblers uttered more irrational verbalizations than non-regular gamblers.[294] More recently, a study

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289. Ferland et al., *supra* note 263, at 19, 21.

290. *See, e.g.,* Griffiths, *supra* note 274, at 354 (noting that "cognitive factors may be crucial in understanding persistent gambling").

291. Robert Ladouceur, *Perceptions Among Pathological and Nonpathological Gamblers,* AD-DICTIVE BEHAVS., Oct. 14, 2003, at 3, *available at* http://www.sciencedirect.com.

292. Michael B. Walker, *The Presence of Irrational Thinking Among Poker Machine Players, in* GAMBLING AND COMMERCIAL GAMING: ESSAYS IN BUSINESS, ECONOMICS, PHILOSOPHY AND SCIENCE, *supra* note 107, at 489-90. Walker cautions that his study is based on a small sample. *Id.* at 496.

293. Anne Gaboury & Robert Ladouceur, *Erroneous Perceptions and Gambling,* 4 J. SOC. BEHAV. & PERSONALITY 411, 414 (1989). This study excluded non-game related verbalizations. Griffiths, *supra* note 274, at 364. Griffiths' study of slot machine play included non-game related verbalizations and, corrected for that difference, reached similar results. *Id.; see also* Delfabbro & Winefield, *supra* note 253, at 125 (finding results generally consistent with the Gaboury and Ladouceur study).

294. Griffiths, *supra* note 274, at 363. Delfabbro and Winefield note, however, that it is not clear how these irrational beliefs develop and what their exact relationship to behavior is. Paul H. Delfabbro & Anthony H. Winefield, *Poker-machine Gambling: An Analysis of Within Session Characteristics,* 90 BRIT. J. PSYCHOL. 425, 437 (1999). Delfabbro also notes that regular gamblers may express different types of irrational beliefs because they have had more time while playing gambling machines to develop new "associations, strategies, and more colourful ways of describing them." Delfabbro, *supra* note 259, at 6.

found that, although pathological gamblers do not "report significantly more erroneous perceptions than nonpathological gamblers," pathological gamblers have significantly more conviction in those erroneous beliefs.[295] Professor Ladouceur theorized from the results of the study that, although nonproblem gamblers seemed to learn to criticize their erroneous perceptions from their losses, pathological gamblers appeared to increase their conviction in their beliefs.[296]

A study published in 2002 of video lottery terminals, specifically Canadian electronic gaming machines that can be configured either to feature spinning reels or video poker, suggests that informational remedies applied during gambling, as well as other ways of manipulating the machine gambling experience, can help reduce machine gambling by pathological gamblers.[297] In that study, the researchers discovered that a simple informational remedy, having a single counter displaying a running total of how much the gambler had either won or lost, made it significantly easier for a pathological gambler to end a play session.[298] By comparison, the counter did not significantly affect the play of non-pathological gamblers.[299] Because it was a laboratory study with a relatively small sample, it is not certain whether the results of this study will accurately predict the general behavior of gamblers in casinos, however.[300]

Clearly, research into the cognitive causes and treatments for problem and pathological gambling is still in its initial stages, and significant research remains to be done.[301] For example, studies conducted in laboratory conditions should be replicated in more real world settings.[302] Also, many studies of pathological or problem gamblers have, as their subjects, those who have presented themselves for

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295. Ladouceur, *supra* note 291, at 9.

296. *Id.*

297. Pamela Loba et al., *Manipulations of the Features of Standard Video Lottery Terminal (VLT) Games: Effects in Pathological and Non-Pathological Gamblers*, 17 J. GAMBLING STUD. 297, 319 (2002).

298. *Id.* at 314.

299. *Id.*

300. ALEX BLASZCZYNSKI ET AL., THE ASSESSMENT OF THE IMPACT OF THE RECONFIGURATION ON ELECTRONIC GAMING MACHINES AS HARM MINIMISATION STRATEGIES FOR PROBLEM GAMBLING 36 (Nov. 2001), *available at* http://www.psych.usyd.edu.au (last visited Jan. 8, 2004). The Blaszczynski report also criticized the Loba study, then in unpublished form, by arguing that "variables were manipulated in combination making it impossible to determine which made the primary contribution[ ]" and the study participants "were instructed to play for set periods and it is not clear whether they played with their own money or money provided by the researchers." *Id.* at 39.

301. *Id.* at 40.

302. *Id.*

treatment, which may not be a representative group.[303] In fact, ethi-
cal considerations may restrict the type of studies that may be used on
problem gamblers, for fear that the study may increase their gam-
bling.[304] If "Truth in Gaming" were solely for the benefit of problem
and pathological gamblers, more studies should be undertaken to en-
sure that price disclosures would help them. However, given that non-
problem, recreational gamblers would also benefit from the changes
that I suggest and that price disclosure is a basic part of consumer
protection, this proposal should not rise or fall solely on the results of
further study of problem and pathological gamblers.

If information about the true costs of gambling helps pathologi-
cal gamblers, that information should not be limited to treatment ses-
sions for problem gamblers.[305] Given the extremely limited funds that
states have dedicated to treating pathological gamblers, too few patho-
logical gamblers ever receive any organized treatment.[306] As of 1999,
"fewer than 150 clinicians are nationally certified gambling counsel-
ors, and only 100 programs provide treatment for pathological gam-
blers . . . and individuals can remain on a waiting list for as long as six
months."[307] The treatment of problem gambling is often not covered
by insurance, which limits the funds available for treatment.[308] No
doubt for a multitude of reasons, both internal and external to them-
selves, most pathological gamblers do not seek treatment, let alone
receive any.[309]

States and the federal government should not wait passively until
too many become problem and pathological gamblers. Instead, they
should ensure that all gamblers have easy access to the information
that can help them control their gambling. Then, gamblers can bene-
fit from this information before their gambling beliefs and patterns
become fixed and harder to change.[310] Such informational disclosure
should be mandated so long as the distribution of such information is

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303. *Id.*

304. *Id.*

305. *See id.* at 41-42 (discussing various research strategies for minimizing the problem
of gambling).

306. *See* Petry & Armentano, *supra* note 262, at 1022 (indicating that there are few state
supported treatment programs).

307. *Id.*

308. Rychlak, *supra* note 4, at 340.

309. Petry & Armentano, *supra* note 262, at 1021.

310. Delfabbro, *supra* note 259, at 18.

not too expensive and does not have other detrimental effects that outweigh the benefits to be gained.[311]

VII. "TRUTH IN GAMING": DESIGNING THE MOST EFFECTIVE INFORMATIONAL REMEDIES FOR GAMBLERS

Deciding that casinos should be required to disclose to gamblers the true cost of slot machines leads directly to the question of how casinos can effectively disclose the risk or costs of gambling to consumers. Educational efforts, like advertising campaigns, can succeed or fail.[312] The exact wording of a particular warning may be crucial to consumers' ability to glean useful information from it.[313] From the literature on other hazard warning programs, the following lessons can be discovered on how best to educate consumers.

The information should be presented as simply and as clearly as possible, focusing on that which most affects the consumer.

The history of disclosures indicates that this simple rule is violated all too often.[314] Where too much information is presented to consumers, they tend to ignore it, treating it as if no useable information had been provided to them.[315]

The information should be tailored as much as possible to the individual consumer.

Consumers, unsurprisingly, are more likely to notice and heed warnings that are individually tailored to them.[316] For example, a study of various educational campaigns concluded that the most effec-

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311. *See* BLASZCZYNSKI ET AL., *supra* note 300, at 15 (stating that policies on gambling should address the issue of costs by implementing strategies that minimize interference to those who gamble responsibly).

312. *Id.* at 43-44 (indicating that players may not care whether the cost is or is not advertised).

313. "It turns out that human performance in probabilistic reasoning tasks is remarkably sensitive to the format in which information is presented and answers asked for." Robert E. Scott, *The Limits of Behavioral Theories of Law and Social Norms,* 86 VA. L. REV. 1603, 1642 n.89 (2000) (citing studies showing that participants' ability to answer probabilistic questions depended on whether those questions were framed in terms of probabilities or frequencies).

314. For example, a study of hazard warnings used for pesticides showed that the detailed information about the products' health risks confused consumers. W. Kip Viscusi, *Using Warnings to Extend the Boundaries of Consumer Sovereignty,* 23 HARV. J.L. & PUB. POL'Y 211, 230 (1999).

315. Sunstein, *supra* note 192, at 653, 668.

316. Robert S. Alder & R. David Pittle, *Cajolery or Command: Are Education Campaigns an Adequate Substitute for Regulation?,* 1 YALE J. ON REG. 159, 188-89 (1983) (suggesting that people learn more from informational remedies tailored to fit them).

tive campaign was one in which the researchers were able to analyze the behavior patterns of the individual participants and construct "individualized behavior modification techniques"—tailored programs to fit the individual's own lifestyle and risks.[317] Such individually tailored information was far more effective than the generalized information given in the other informational campaigns studied.[318]

A common format for the information provided should be used throughout the industry, if possible.

Standardizing the information provided to consumers allows consumers to become acquainted with the format of the information and to learn how to read and understand the information more easily and quickly. Some gambling terms, such as hold percentage or payback percentage, are conceptually difficult, and those who write about gambling find that consumers and even many casino professionals often do not understand them.[319] The fewer terms consumers need to learn and the more standardized the usage is, the more easily consumers can educate themselves about the specific information provided.[320] Furthermore, by standardizing information disclosures across the gaming industry, consumers will be better able to compare prices among different games in the same casino, among casinos, and even among different geographical areas.[321] Standardization of information disclosure also makes gathering and disseminating the information less expensive for the casinos and easier for gaming commissions to monitor.[322]

The information should be provided in such a way that its meaning or import cannot easily be misrepresented or explained away by a seller of a good or service.

If gambling consumers are provided information about gambling prices, it should be stated to them in a common sense manner, so that it would be difficult for unscrupulous casino operators to undercut the usefulness of the message by misrepresenting its meaning. The

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317. *Id.* at 186.

318. *Id.* at 188.

319. HANNUM & CABOT, *supra* note 103, at vii (indicating that "[m]any casino professionals limit their advancements by failing to understand the mathematics of the games and their relationships to casino profitability").

320. *See* Alder & Pittle, *supra* note 316, at 188.

321. *See* William M. Sage, *Regulating Through Information: Disclosure Laws and American Health Care*, 99 COLUM. L. REV. 1701, 1741 (1999) (discussing this point in the health care context).

322. *Id.*

best way to accomplish this would be to not rely on some artificially constructed indicator of price or return.[323] Instead, the provided information should use words that most consumers will already understand.[324] The hazard of creating a standardized price indicator that is not already commonly known is demonstrated in the Truth in Lending context, where consumers are informed of the cost of loans through a figure called the Annual Percentage Rate (APR).[325] Consumers are often misled as to the meaning of the APR; they are told that it is merely a number that the government orders the lender to provide or that it indicates something other than its true meaning.[326]

Gamblers may have difficulty understanding such terms as payback percentage, but, almost universally, they understand winning and losing. If the information regarding price of games is expressed in terms of average amount lost rather than a payback percentage, gambling consumers would better understand the information provided.[327] However, casinos would likely fight having to use the word "loss" in any form in price disclosures.

Informational Remedies Should Avoid, to the Extent Possible, Presenting the Information in Terms of Probabilities.

Consumers evidently have a more difficult time effectively processing information presented to them in probabilistic form.[328] Worse yet is consumers' inability to compare one probability against another to see which risk is better for them.[329] Because probabilistic information is at the heart of gambling, this inability to understand that form of information affects gamblers more than other consum-

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323. *See id.* (discussing the benefits of standardization in the health care context).

324. *See id.*

325. *Re-Examining Truth In Lending: Do Borrowers Actually Use Consumer Disclosures?*, 52 CONSUMER FIN. L. Q. REP. 3, 4-7 (1998).

326. *Id.* at 6.

327. *See* ABT ET AL., *supra* note 109, at 263-64.

328. Cass Sunstein points out that some consumers may not welcome the disclosure of probabilistic information. *See* Sunstein, *supra* note 192, at 653, 668 ("There is also evidence that people feel frustrated and frightened by probabilistic information and greatly prefer a certain answer."). Such fear and frustration is likely more commonly experienced, however, where probabilistic information concerns dangers to health or safety than when it concerns the odds of winning a prize. Less fear of such probabilistic information in gaming situations does not necessarily indicate a greater understanding of it, however.

329. *See, e.g.,* Jacob Jacoby, *Is It Rational to Assume Consumer Rationality? Some Consumer Psychological Perspectives on Rational Choice Theory*, 6 ROGER WILLIAMS U. L. REV. 81, 112 (2000) ("[M]any consumers haven't the foggiest idea of how to work with independent and especially joint probabilities."); *see generally* Amos Tversky & Daniel Kahneman, *Judgment Under Uncertainty: Heuristics and Biases*, in JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES (Daniel Kahneman et al. eds., 1982).

ers.[330] Gamblers, for example, have great difficulty in judging the cost of gambling and its expected value to them if they are given their chances of winning in the form of odds.[331]

A. Specific Types of Informational Remedies in Casino Gambling

1. *General Warnings of the Costs of Gambling.*—One possible style of warnings could mimic those that currently are required on alcohol[332] and tobacco products.[333] In fact, similar warning labels for gambling have occasionally appeared.[334] For example, in New South Wales, Australia, new gaming regulations enacted in 2000 required any registered club to display in its poker machine areas a notice describing the chances of winning the major prize on a particular gaming machine, in the following form:

> The chance of winning a maximum prize up to $10,000 on a gaming machine is generally no better than 1 in 1,000,000.[335]

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330. *See* Cabot & Hannum, *supra* note 125, at 333 ("Probability is at the foundation of the gaming business. Every wager in a casino is designed and calibrated according to the laws of chance to exact a certain percentage of the players' money.").

331. *See, e.g.,* ABT ET AL., *supra* note 109, at 263. "Odds and price are frequently confused by gamblers and even by the operators of commercial gambling businesses." *Id.*

332. The Alcoholic Beverage Labeling Act of 1988, 27 U.S.C. § 215 (2000). This act requires the following warning to be placed on alcoholic beverages: "GOVERNMENT WARNING: (1) According to the Surgeon General, women should not drink alcoholic beverages during pregnancy because of the risk of birth defects. (2) Consumption of alcoholic beverages impairs your ability to drive a car or operate machinery, and may cause health problems." *Id.* This warning is a significantly "watered-down" version of the five rotating warnings that had been originally proposed. Carter H. Dukes, Comment, *Alcohol Manufacturers and the Duty to Warn: An Analysis of Recent Case Law in Light of the Alcoholic Beverage Labeling Act of 1988,* 38 EMORY L.J. 1189, 1208-09 (1989).

333. Cigarette Labeling and Advertising Act, 15 U.S.C. §§ 1331-1341 (2000).

334. *See* DEP'T OF GAMING AND RACING, NEW SOUTH WALES GOV'T, REGISTERED CLUBS AMENDMENT (RESPONSIBLE GAMBLING) REGULATION 2000, at 1 (Apr. 2000), *available at* http://www.dgr.nsw.gov.au/IMAGES/PUBLICATIONS/Liquor&Gaming/LegislationBull etins/Clubs_Leg_April_00.pdf (last visited Jan. 9, 2004) (discussing regulations that require gaming clubs to post gambling warnings).

335. *Id.* at 2. The New South Wales regulations required registered gaming clubs to post both a gambling warning notice and a problem gambling notice:
    DON'T LET GAMBLING TAKE CONTROL OF YOUR LIFE
    GAMBLING CAN BECOME ADDICTIVE
    EXCESSIVE GAMBLING CAN RUIN LIVES
    EXCESSIVE GAMBLING CAN DESTROY FAMILIES AND FRIENDSHIPS
    EXCESSIVE GAMBLING CAN LEAD TO THE LOSS OF YOUR HOME OR OTHER ASSETS
    EXCESSIVE GAMBLING CAN AFFECT YOUR HEALTH
Id.

Although such disclosure is a step in the right direction, it is flawed in that it presents the information in terms of probabilities, which consumers have difficulty understanding, and it does not let the gambler know how much on average she can expect to lose in any effort to win the maximum prize.

2.   *Tailoring the Informational Remedy to the Specific Game or Machine.*—A more effective informational remedy would be one which requires casinos to provide on each machine the true cost of gaming on that machine. Such a remedy would allow an individual patron to decide if the gamble is worth the price.[336] In addition, the remedy may coerce casinos to compete on the basis of price, which would likely drive down the hold percentages of slot machines.[337] The cost of slot machines should be disclosed in terms of their hold percentages and not their payback percentages, because the former focuses on what both the customer and the casino really care about—how much the slot machines really cost.[338] Also, the payback percentage is inherently confusing, as it is akin to asking someone returning from a trip to Las Vegas, "How much money didn't you lose?"[339] Using the hold percentage also better displays the real variation between different slot machines.[340] For example, at first glance, there seems to be little difference between a payback percentage of 96% and of 98%. However, expressed in hold percentages, it is easy to see that a 4% machine is twice as expensive as a 2% machine.[341]

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336. *See supra* Part V (discussing New Jersey casinos' unwillingness to advertise their slot machine payback percentages out of fear that a price war would develop).

337. *Id.*

338. *Id.*

339. *See, e.g.,* AUSTRALIAN PRODUCTIVITY COMM'N, AUSTRALIA'S GAMBLING INDUSTRIES: INQUIRY REPORT, REPORT NO. 10, at 16.14 (Nov. 26, 1999), *available at* http://www.pc.gov.au/inquiry/gambling (last visited Jan. 8, 2004) (providing an example of the difficulty consumers have in understanding the payback rate) [hereinafter INQUIRY REPORT]. In Australia, the Australian Gaming Machine Manufacturers Association (AGMMA), hardly an unbiased organization, questioned whether disclosing price would have any affect, stating:

When gaming machines were first introduced into the ACT, it was required that the player return be advertised on the front of the machines. For the first six months there was a landslide of complaints from individual players that they didn't get the advertised rate. Within twelve months the complaints had virtually ceased—presumably because the players stopped believing or stopped caring. In any event, it made no difference to the play rates—they mirrored results obtained on identical NSW machines with no such signage.

Id. The Productivity Commission goes on to note that the AGMMA "considered that the use of average payout rates was highly likely to confuse players or create false expectations, because of the way gaming machines work." *Id.*

340. *See generally id.* at 16.14-16.22 (discussing options for price disclosure).

341. *See supra* notes 113-114 and accompanying text (detailing the method used to calculate the hold percentage).

Given the difficulty many consumers have with probabilistic infor-
mation, the average loss should be expressed to customers not only as
a percentage rate, requiring at times complex mental math, but also
as an exact sum.[342] It would likely be easier for a gambler to under-
stand an average hold amount of three cents for each quarter bet than
for them to understand a 12% hold percentage.

Providing the average loss in terms of the amount of money
rather than a percentage rate would have one great advantage. For
traditional slot machines, the hold percentage of slot machines de-
creases as the denomination accepted by the slot machine in-
creases.[343] If a consumer were only given the hold percentage, the
dollar slots may seem like the least expensive betting option.[344] This
apparent bargain would be an illusion if the consumer were most con-
cerned about losing as little money as possible or playing for as long as
possible on a given sum of money.[345] Using the hold amount instead
of hold percentage has another advantage. If customers are told only
that they will lose on average 6% of the amount bet on a certain ma-
chine, and they arrive with $100 to bet, they might erroneously con-
clude that they are likely to lose only $6. Their error would stem from
the fact that most gamblers regamble their winnings, and many con-
tinue to play slot machines until they have lost all of the money they
brought with which to play.[346] By comparison, if a gambler is in-

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342. *See supra* notes 328-331 and accompanying text (discussing the difficulties many
consumers have in understanding and using probabilistic information).

343. *See, e.g.,* Press Release, Nevada Gaming Control Bd., Nevada Gaming Revenues, Cal-
endar Year 2003 Analysis (Feb. 11, 2004), *available at* http://gaming.nv.gov (last visited
Mar. 6, 2004) (indicating that during the year 2003, the hold percentage for slot machines
in Nevada was 8.17% for penny slot machines, 7.89% for nickel slot machines, 5.51% for
quarter slot machines, 4.67% for dollar slot machines, and 3.39% for twenty-five dollar slot
machines). This analysis uses the term "hold percentage" which is equivalent to the defini-
tion of hold percentage used in this article. *Id.; see also supra* note 106 (defining hold
percentage). By comparison, during its fiscal year 2000, the average comparable hold per-
centages for slot machines in South Dakota were 8.42% for nickel slots, 9.51% for quarter
slots, and 8.38% for dollar slots, or nearly twice as expensive as Nevada slot machines for
the quarter and dollar games. SOUTH DAKOTA COMMISSION ON GAMING, ANNUAL REPORT
FISCAL YEAR 2000 & GAMING ABSTRACT 10, *at* http://www.state.sd.us/dcr/gaming/annual_
report/gamannrpt.pdf (last visited Jan. 8, 2004). The South Dakota report notes that it is
not audited and may be inaccurate, as it adds slot machine and other electronic games
together. *Id.*

344. *See* Nev. Gaming Control Bd., *supra* note 343 (indicating that the hold percentages
for higher denomination slots are less).

345. For example, a dollar machine with a hold percentage of 4.4% costs, on average,
4.4 cents a play. *Id.* By comparison, a quarter machine with a hold percentage of 5.4%
costs only 1.35 cents per quarter bet, or about 3 cents per play less than the dollar ma-
chine. *Id.*

346. Delfabbro, *supra* note 259, at 8.

formed that he will lose ten cents each time he plays a dollar slot if it has a 10% hold percentage, he can determine, on average, how long his stake will hold out.

The fact that slot machines can use many different types of coins affects how disclosures should be made. One of the newest trends is the use of slot machines that allow a player to bet numerous coins at once, effectively allowing a gambler on a nickel slot machine to bet any amount between five cents and multiple dollars.[347] Disclosing this cost per nickel would be too confusing.

Ideally, the slot machine's disclosure of its average loss should be interactive, so that as a gambler wagers more coins or money, he can see how much his hold percentage changes and his average expected loss increases. Slot machines should be designed in such a way that their face should have one display that tracks how the hold percentage changes with the changing gambling patterns of the individual player. This way, a player could learn whether betting the maximum number of quarters decreases the hold percentage from, say 5.5% to 4.9%. A gambler could also learn whether and when a slot machine with a progressive jackpot or one that allows players to work toward greater jackpots is a better bet than other available machines. Another display would track the hold amount given the amount wagered by the gambler. This would let the gambler discover how much, on average, she can expect to lose if she bets 25 nickels at a time, as opposed to 20 nickels or 10. With each new amount she wagers, the hold amount would almost certainly change, while the hold percentage may change or not.

This interactivity would have several advantages. First of all, it would quickly educate many gamblers about hold percentages and hold amounts, as well as how their style of play affects the amount of likely losses. If gamblers see the hold percentage for each machine and can see how their wagering affects that hold percentage, they could learn the true extent of their ability to alter the hold percentage of the slot machine and, therefore, might be less convinced that they can otherwise control the machine.[348] This knowledge could diminish the illusion of control over machines that affects some problem

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347. Grochowski, *supra* note 137, at 29. Thus, nickel slots may allow the wagering of a greater sum than quarter slots, which may allow a maximum bet of only $1.25. Associated Press, *Nevada Casinos Find Gains in Nickel Slots Are No Small Change*, SAN DIEGO UNION & TRIB., Dec. 29, 2001, at A10.

348. *See* Walker, *supra* note 292, at 489-90 (noting that a few video poker players irrationally believe that they possess "special knowledge" of machines which will give them an advantage).

gamblers.[349] Secondly, many gamblers would likely enjoy this new in-
teractive aspect to slot machines, as it would challenge them to find
machines and gambling strategies that provided the greatest re-
turn.[350] Rather than being a burdensome regulation, this interactive
information may prove to be an added pleasure for slot machine play-
ers, adding an interesting level of skill.[351] Gamblers who do not want
to have this interactive nature could always ignore the numbers dis-
played on the slot machine.

3. *Tailoring the Informational Remedy to the Specific Gambler.*—An
important tool to help gamblers limit excessive gambling would be to
give them a simple and accurate method of tracking their winnings
and losses so that they can monitor how much gambling costs them
personally. As noted in Part VI, gamblers and especially problem
gamblers appear to over-estimate the amount they win and under-esti-
mate their losses on a systematic basis.[352] An Australian commission
on gambling noted that "[t]racking expenditure by gamblers is much
more difficult than other forms of entertainment because of the vola-
tile patterns of wins and losses, the fact that wins are more easily recal-
led than losses, other problems of biased evaluation by gamblers . . .
[,] and the lack of records in many cases."[353]

One simple way of tracking winnings and losses would be equip-
ping slot machines with a counter that records how much the gambler
is ahead or behind in that particular session.[354] Machines could be
designed so that the use of the counter is optional, and gamblers
could turn off the counter if they so desired, in order to outflank the
casinos' argument that gamblers would be annoyed by the counters
and would not want them installed. The default mode of the slot ma-
chines should be to have the counters on, so that gamblers would
need to choose affirmatively to turn them off, thereby maximizing

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349. *Id.*

350. *See id.* at 486 (noting that "[p]oker machine players report playing for amusement
and excitement").

351. *Id.*

352. *See supra* notes 273-274 and accompanying text; *see also* GERSTEIN ET AL., *supra* note
39, at 33 (reporting that based on the self-reports of gamblers, "[t]he balance of past-year
casino wins and losses for last-day and past-year items shows patrons ending up with a $5
billion or $3 billion windfall, instead of leaving more than $20 billion at tables and ma-
chines—the revenues reported by the casino industry").

353. AUSTRALIAN PRODUCTIVITY COMM'N, *supra* note 339, at 16.26.

354. *See* Loba et al., *supra* note 297, at 298-317 (detailing a study indicating that even this
simple informational remedy causes pathological gamblers to reduce the amount of their
gambling).

their use and ensuring that gamblers know about the counters.[355] This single-session information is limited, though, because it would not give gamblers a broader view of their overall gains and losses from gambling, and gamblers might ascribe any losses to simply sitting at a "cold" machine.

With the advent of computerized slot machines and casino databases, it would be easy for many casinos to give individual gamblers highly detailed information regarding their overall gains and losses. Casinos have already begun to keep extensive information about their customers through the use of what are called "slots clubs."[356] Slot clubs are the method by which casinos track the gambling of individual slots betters and determine how much they play, win, and lose.[357] To track the play of table games, casinos have long had a system of employees filling out sheets noting the amount bet by table players, allowing the casino to discover who its high-rolling customers are and provide these valuable players with complimentary services, such as meals, hotel rooms, or transportation, that correspond to the player's level of betting.[358] Those who bet and risked more received better complimentary services, known as "comps," to induce them to return to the casino.[359]

For slots players, such a systematic tracking of the individual player's betting was for a long time difficult.[360] Slots players do not conduct their gambling under the watchful eye of a dealer,[361] and additionally, watching slots players would not only be expensive, given

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355. For example, if a counter on a slot machine has been turned off, the slot machine could automatically turn the counter back on after the machine has sat idle for five minutes, indicating that the gambler has stopped playing on the machine. *See id.*

356. Barfield, *supra* note 5. The first use of slot clubs was possibly in 1982 at the Golden Nugget in Atlantic City. *Id.*

357. *Id.*

358. *See, e.g.,* NICK GULLO & DAVE VERBON, CASINO MARKETING: A PROFESSIONAL APPROACH 115 (1982) (discussing the handwritten rating card for individual players used in the pre-computer age).

359. FRIEDMAN, *supra* note 33, at 137. "Comping," the practice of providing free goods or services to customers, began in Las Vegas with free cocktails in the early 1940s, with meals added as comps in the late 1940s, and by the end of the 1950s, free hotel rooms. *Id.* One guide to gambling estimates that casinos are willing to return about 40% of a player's losses to that player in the form of comps. Steve Bourie, *Casino Comps—Part I, in* AMERICAN CASINO GUIDE, *supra* note 1, at 16.

360. *See* Barfield, *supra* note 5 (indicating that modern slot-player tracking systems evolved in the early 1980s in Atlantic City).

361. Traditionally, pit bosses kept notes on gamblers. *Id.* "Player tracking has always existed in some form. It used to be notes in a pit boss' pocket to help schmooze a high roller: his favorite drink, his wife's name." *Id.*

the numerous slot machines and gamblers, but also might antagonize the players who value their relative privacy.[362]

Slot clubs, on the other hand, track players with less expense and intrusiveness and with more accuracy.[363] Upon joining a slot club, a player is issued a plastic card which looks much like a credit card with a magnetic strip on the back.[364] Slot machines have readers that are able to decode the information about the player contained on the magnetic strip.[365] As soon as the player slides the slot club card into the slot machine's reader, the slot machine is able to record how much that particular player bet and the player's wins or losses.[366]

Casinos use this information to award comps and also to spur greater play.[367] If a slot player is betting heavily, the slot machine's monitoring system will detect that use, and the casino can send a floor person to offer the player a beverage and establish rapport.[368] Some slot machine systems have countdown systems, which notify players that they must play a certain number of coins to receive a point good toward the redemption of "comps," and thus encourage players to stay at the slot machine until they have received enough points.[369] Other systems allow the slot machine to display a player's total points good toward "comps," saving the player a trip to the slot club booth to inquire how many points she has accumulated.[370] The comp system is so important to casinos that on average they spend more of their ad-

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362. By comparison, using computer analysis of information flowing from its slot machines, a casino can track 2000 machines virtually instantaneously. *Id.* One casino's information systems director can "tap his laptop computer and get a floor map of [the casino's] 2,000 slot machines. The dots change colors in response to dozens of queries he can make about who plays what." *Id.*

363. NESTOR, *supra* note 119, at 266. Nestor notes that casinos created slot clubs originally for slots but are now integrating them to track table games as well. *Id.*

364. John Grochowski, *Players Bet On Comps to Stretch Bankrolls*, CHI. SUN-TIMES, Feb. 4, 2001, at 7.

365. Barfield, *supra* note 5.

366. *See Critic: Casinos Target Addicts: Slot Clubs Allegedly Used to Identify Problem Gamblers*, PEORIA J. STAR, Apr. 20, 1998, at A1 (arguing that casinos use their ability to track gamblers to identify problem gamblers and encourage them to gamble further) [hereinafter *Critic*].

367. "A casino may, for example, comp rooms, meals, or drinks depending on how much an individual is spending in the casino." SHELLY FIELD, 100 BEST CAREERS IN CASINOS AND CASINO HOTELS 19 (1997). The number and generosity of the comps "generally depend on the amount an individual is spending in the casino. The host may track the amount being spent by customers in order to know what type of comps should be authorized." *Id.* at 23.

368. Erika Gosker, Note, *The Marketing of Gambling to the Elderly*, 7 ELDER L.J. 185, 192 (1999).

369. GROCHOWSKI, *supra* note 29, at 135.

370. *Id.*

justed gross revenue on comps (21%) than they do on employee pay-roll (18%).[371]

Casinos use the information they glean not only to award comps, but also to target their marketing and promotion efforts. For example, they may send mailers to individual gamblers who are more likely to come in for a Tuesday or Wednesday promotion.[372] By purchasing information from other sources, they can discover if customers are also playing at other casinos.[373] The information casinos gather is so specific that they could "literally go through there and do a slice and dice of [their] database and get every 20-year-old unmarried female who spends more than $20 a week and drives a Toyota," according to an executive for a firm that develops such player-tracking systems.[374] Casinos are now in the process of developing even more powerful tracking systems, able to log over a million slot club card transactions per month and store all of that information for years, with the ability to retrieve it whenever needed.[375] At least one casino chain's program links all of its casinos around the country, so that a gambler's play in any casino in the chain counts toward complimentary services.[376]

The information casinos collect on individual gamblers could be used to notify players of the costs of playing slots. That notification could be personalized in a way that would make it more effective than merely giving a player information about the average hold percentage of an individual machine or even the average hourly cost of playing that machine.[377] Instead, the slot club could be used to allow each

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371. GARRETT, *supra* note 15, at 7.

372. Barfield, *supra* note 5.

373. Christina Binkley, *Gambling: Harrah's Builds Database About Patrons*, WALL ST. J., Sept. 2, 1997, at B1.

374. Barfield, *supra* note 5.

375. *See id.* (stating that the current system in place at the Barona Indian Reservation Casino logs 1.2 million transactions per month, can store the data for years, and retrieve data at will).

376. John Grochowski, *Vegas Faces Competition from California Casinos*, CHI. SUN-TIMES, Jan. 5, 2001, at 21 (noting that Harrah's Total Rewards program offers participants comps and gifts at any Harrah's casino).

377. A few Australian states have begun experimenting with informational remedies, such as requiring casinos to provide activity statements giving players summaries of their winnings, losses, and time spent gambling. *See, e.g.*, DEP'T OF GAMING AND RACING, NEW SOUTH WALES, AUSTRALIA, GAMING MACHINES AMENDMENT 2002, *available at* http://www.dgr.nsw.gov.au/HTML/LEGISLATION/amended/gaming_machines_reg.html (last visited Apr. 4, 2004). At least one Australian state requires a "player information display" on gaming machines, which lists payback percentages and other information. AUSTRALASIAN GAMING MACHINE MFRS. ASS'N, REVIEW OF GAMBLING HARM MINIMISATION MEASURES BY THE INDEPENDENT PRICING TRIBUNAL OF NEW SOUTH WALES (Nov. 14, 2003), *available at* http://www.ipart.nsw.gov.au/submiss/Gambling03_Subs/AGMMA%20-%20S5562.pdf (last vis-

player to find out how much that particular player has won or lost over a set period of time, be it a day, a week, a month, a year, or longer. In this way, a consumer could easily gain overall pricing information about her own gambling habits that is otherwise fairly difficult for her to track.[378]

Requiring casinos to disclose this information is appropriate for several reasons. First, those who gamble are the ones most likely to be affected by casinos' use of tracking systems, as casinos use their databases to focus on luring the most regular gamblers.[379] Because casinos can use slot clubs to promote gambling especially among frequent gamblers, it seems appropriate to use this same information to decrease gambling by problem gamblers. In addition, as gamblers come to rely on the comps provided by casinos in making their determination about how often and where to gamble, gamblers should be able to ensure the reliability of the casinos' tracking methods by viewing as much of the casinos' information as possible.[380]

Forcing casinos to disclose individual gambling records to those gamblers who desire them will help gamblers understand how they consume gambling as a product, which will, in turn, make them better consumers of gambling.[381] In an ideal world, individual consumers could contract with casinos, allowing casinos to collect data regarding the consumer's gambling habits if, in return, the casino would share

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ited Apr. 4, 2004). However, these informational disclosures seem poorly designed, as the cost of gambling is expressed in payback, not hold, percentages, and not in hold amount. As a result, too much less-important information is included, such as hit percentage and jackpot probabilities. Still, it is too early to determine what effects these measures will have.

378. The difficulty of tracking casino gambling losses is aggravated by the fact that the gambling is continuous, with a large number of small bets, making careful tracking more arduous. *See* ABT ET AL., *supra* note 109, at 72 (stating that the continuous nature of gambling prevents gamblers from reflecting on their losses). Furthermore, casinos attempt to distract their customers from thinking about their losses. *Id.* Abt, Smith, and Christiansen note:

> Casinos utilize carefully calculated distractions—free drinks, flashing mirrored lights, provocatively dressed women, and in areas of the casino floor devoted to slot machines the jangle of coins and bells announcing jackpots. The result is that it is easier to lose track of one's wins or losses inside a casino than at any other commercial gambling game.

Id.

379. *Critic, supra* note 366.

380. *See* Daniel J. Solove, *Privacy and Power: Computer Databases and Metaphors for Information Privacy*, 53 STAN. L. REV. 1393, 1455 (2001) (referring to this process as "watching the watchers," a system with reciprocal monitoring instead of the current unilateral monitoring); A. Michael Froomkin, *The Death of Privacy?*, 52 STAN. L. REV. 1461, 1463 (2000) (noting that "protecting the acquisition and dissemination of information is an essential means of empowering citizens in a democracy").

381. *See supra* notes 240-249 and accompanying text (discussing the benefits of increased information disclosure in gambling and its beneficial effects on gamblers as consumers).

that information with the consumer.[382] However, the transaction costs of such individual contracting are high, as such a system would force casinos to negotiate with each individual gambler. Thus, a default rule is appropriate.[383] Furthermore, because casinos are more knowledgeable than gamblers about the effects of slot clubs and would likely incorporate waiver of the default rules in any form agreement included in the slot club contract, a default rule requiring disclosure by the casinos should be non-waivable by the consumer.[384] This non-waivable default can be justified by both the difficulty of educating gamblers about the effects of waiving the rule and the twin goals of protecting the individual gambler and also serving society's interest in minimizing problem gambling.[385]

This disclosure to gamblers of the information that casinos collect could be done in several ways. First of all, casinos could be required to send, to each slot club member who requests one, an annual accounting of how much the player won or lost during the year. Casinos could also allow players to use the Internet to track their win and loss amounts. At least one casino currently allows members of its slot

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382. *See* Jessica Litman, *Information Privacy/Information Property*, 52 STAN. L. REV. 1283, 1312 (2000) (quoting Rochelle Cooper Dreyfuss).

383. For the importance of a default rule in data collection of consumers, see Lynn Chuang Kramer, *Private Eyes Are Watching You: Consumer Online Privacy Protection—Lessons from Home and Abroad*, 37 TEX. INT'L L.J. 387, 412 (2002) (stating that "[t]he default rule would not be so important were it not for the fact that most people tend to use the default rule—either out of ignorance, laziness, or indifference").

384. The unfairness of mere waivable defaults is discussed by Daniel Solove:

> These laws [regarding consumer information] must consist of more than default rules that can be contracted around or property entitlements that can be bartered away. The market-based solutions work within the existing market; the problem with databases is the very way that the market deals with personal information—a problem in the nature of the market itself that prevents fair and voluntary information transactions.

Solove, *supra* note 380, at 1456.

385. Cass Sunstein notes:

> Of course, many statutes create nonwaivable rights. They bypass the question of default rules entirely by banning bargaining altogether. There are many reasons why legislatures and courts might take this approach. Perhaps third-party effects argue against waiver. Perhaps waivers would be inadequately informed; behavioral economics offers a number of reasons why this might be so. Perhaps nonwaivable rights can be justified, in the context of accommodation mandates, on redistributive grounds.

Cass R. Sunstein, *Switching the Default Rule*, 77 N.Y.U. L. REV. 106, 108 (2002) (internal footnotes omitted); *see also* Catherine L. Fisk, *Reflections on the New Psychological Contract and the Ownership of Human Capital*, 34 CONN. L. REV. 765, 783 (2002) (discussing behavioral economists' view of waivable and non-waivable default rights in the context of employment contracts).

club to access their club accounts through the casino's web page, so that members can determine their level of reward credits.[386]

More importantly, casinos could be required to have available in each casino a number of machines that can read the slot player's card and then give the player an immediate update of how much money the player has won or lost in the last day, week, month, or year. If a computer-operated card reader were plugged into the casino's data bank, then a player would be able to find out the costs of his gambling merely by swiping his card through the computer's reader. This access to their gambling information would allow players to discover and easily track their individual cost of playing the slot machines—information directly tailored to them and their style of play.

An even more effective remedy would require each slot machine to be equipped with a small screen that would, at the entry of a password, inform anyone playing it using a slot club card how much that player was ahead or behind for the day, week, month, or year. The slot machine and slot club card could even be designed to notify a gambler when she had lost a pre-set amount, say fifty dollars in a day. In this way, the player could obtain this information as he played, and could be mindful of the overall cost of gambling to him as he decided whether to continue to play. The casino could subtract from any losses the cash rebates that they have provided to the player as part of their slot club comps.[387] Of course, the machine could be set up so that the display of this information would be voluntary, allowing a player to choose not to learn how much he had won or lost. It should also be password protected, so that a gambler could conceal his play from anyone who might have access to his slot club card. Such immediate access to a player's winnings or losses would most accurately disclose to players the information they would need to ensure that they are engaging in an amount of gambling they desire, given its true costs.

There is no doubt that there would be significant expense for casinos to alter machines to include such a display. Such a program should probably be mandated only for casinos with at least a minimum number of slot machines.[388] However, some casinos are already

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386. *See* Harrah's Operating Co., *at* http://www.harrahs.com (last visited Jan. 8, 2004) (allowing club members to access their slot club information by logging into Harrah's "Total Rewards" web page).

387. *See* Jeffrey Compton, *Slot Clubs, in* AMERICAN CASINO GUIDE, *supra* note 1, at 24 (describing the comps available through slot clubs, including cash back based on the amount the slot club member plays).

388. *See* Higgins, *supra* note 133, at 75-76 (detailing the complex hardware required for advanced slot machines).

incurring such costs by operating the casino's slot club, tracking gamblers' wagers, and allowing members to monitor their slot club points.[389] Given that casinos already track millions of transactions and retain this information indefinitely, and that they are able to set up slot machines to notify gamblers how many comps they have earned, requiring this kind of provision of information at the slot machine does not seem to require informational processing and retention abilities that many casinos do not already have.[390] The live streaming video system that some slot machines use is so technologically advanced it has forced at least one manufacturer to move from smaller computer chips that drive the slot machines to "a new PC-based processor called the AVP platform with hard-drive storage,"[391] which certainly seems powerful enough to process the information needed to inform gamblers of the running total of their losses or winnings. In addition, manufacturers have developed systems that permit "gaming machines and slot-accounting systems [to] interconnect, and secure[ ] data transfer between the gaming machine and an online monitoring system . . . [and] permit[ ] transferring player money and promotional credits back and forth between the online monitoring system and gaming machines."[392] This sophisticated technology, financed from the losses of generations of gamblers, should be used for informational remedies that could help pathological and problem gamblers.

An even more versatile and useful system would incorporate "smart card" technology to allow gamblers to track all of their gambling winnings and losses regardless of the casino in which they are gambling. Smart cards are similar to slot club cards, but they have an imbedded computer chip in the card. This imbedded chip allows the

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389. *See* Barfield, *supra* note 5 (noting that casinos notify gamblers of possible benefits to entice them to visit the casinos); Watt, *supra* note 144; *see also* Harrah's Operating Co., *Total Rewards—Program Overview*, *at* http://www.harrahs.com/e-totalrewards/overview.html (last visited Jan. 8, 2004) (describing how a slot club member may check his losses and winnings).

390. New Mexico's ability to monitor all non-tribal slot machines is an example of how inexpensive it is to track slots. According to the 2000 annual report of the New Mexico Gaming Control Board:

> Located at each casino are the same style modems that receive/transmit data between the venue and Board [.] . . . [L]icensed gaming machines in non-tribal venues are under constant control by the CMS down to the component level [.]
> . . . [T]he Board is able to monitor and capture all electronic events occurring on the gaming machines including cash in/out, door openings and substantial wins.

N.M. GAMING CONTROL BD., ANNUAL REPORT FISCAL YEAR 2000, at 10 (2000).

391. Higgins, *supra* note 133, at 75.

392. *Id.* According to a gaming industry executive, this new protocol will be imported into "all casino systems as regulatory approvals are obtained." *Id.*

card not only to store data, but also perform computational func-
tions.[393] Smart cards and slot machines could be designed so that the
slot machine outputs the results of the gamblers' wagers to the smart
card. Then, a gambler could pull up all of his records by inserting the
smart card into a smart card reader and keying in his password or
personal identification number.

If casinos were required to equip slot machines with a smart card
reader-writer that conforms to national standards, a gambler could
take the same card to each casino she goes to, plug it into any slot
machine, and be able to track, compute, and compare not only her
winnings and losses, but also her net actual hold percentage among
all of the casinos she frequents.

Gamblers may have privacy concerns with such cards, and it
would be important to prevent casinos from gaining access to all of
the information stored on the smart card. Cards should feature data
encryption and password protection and also segregate data so that
casinos have access only to certain portions of the data on the card.[394]
Gamblers should not be required to use the smart cards in case they
desire even more privacy protection. However, most gamblers who
already use slot club cards and are familiar with automatic teller cards
would likely, easily, and happily adapt to this smart card technology.

B. Requiring Disclosure Would Increase Competitiveness in the Gaming Industry

Besides helping both recreational and problem gamblers by giv-
ing them the information they need to decide how much to play, re-
quiring casinos to post the hold percentage of each slot machine and
allowing gamblers to track their cumulative hold percentages at each
casino will have the benefit of causing casinos to compete with each
other on the basis of their slot machine hold percentages.[395] Cur-
rently, there is some diffuse competition for slot players based on
payback rates, as players attempt to discover through experience or
what little information is publicly available which casinos have the best

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393. Sara Kehaulanik Goo, *An ID With a High IQ; Smart Cards' Are In Demand as Concerns About Security Rise, But Privacy Issues Loom*, WASH. POST, Feb. 23, 2003, at H01.

394. For a discussion of the privacy concerns of smart cards and the possibility of using data encryption as well as segregation of data to allay those concerns, see Rina C.Y. Chung, *Hong Kong's "Smart" Identity Card: Data Privacy Issues and Implications for a Post-September 11th America*, 4 ASIAN-PAC. L. & POL'Y J. 519 (2003).

395. *See* Pamela Mobilia, *An Economic Analysis of Gambling Addiction, in* GAMBLING AND COMMERCIAL GAMING: ESSAYS IN BUSINESS, ECONOMICS, PHILOSOPHY AND SCIENCE, *supra* note 107, at 473 (arguing that gambling consumption is inversely related to gambling prices in both the long and short term).

hold percentages.[396] Areas that have more competitive slot machine play also generally feature lower hold percentages, aiding consumers.[397] For example, in Nevada, residents are typically more savvy about payback percentages than are tourists, and casinos that cater to residents often have more favorable odds than those catering to tourists.[398] This lowering of prices through competition faces an enormous hurdle, given that the consumer generally cannot tell the hold percentage of individual machines at a casino and therefore has difficulty shopping among casinos and within a casino for the best hold percentages. If good information about casino hold percentages were available, then various casinos would likely settle on a narrow range of hold percentages, low enough that each casino could not be effectively underpriced by competitors, but high enough that efficiently run casinos would earn a sufficient return to stay in business.[399]

If casinos are forced to compete more on price, then the lower costs could reduce the social cost of gambling.[400] Those who are addicted to playing slot machines would find their money lasting longer and would even win money on more occasions. Although this might cause them to gamble more money and more often, it is certainly possible that the net social costs of gambling would be reduced.[401] More importantly, if some consumers, alerted at an early stage by the true cost of gambling, refrain from gambling or restrict the amount of gambling that they engage in, then the social costs could well decline without any restrictions on the liberty of gamblers.[402]

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396. *See supra* notes 163-165 and accompanying text (discussing the publication of payback ratios in gambling magazines and other publications).

397. Eadington, *supra* note 20, at 181.

398. *Id.* at 173. These percentages are skewed, however, because the term "gaming devices" includes in its definition video poker machines, which have a higher payback percentage and are far more common in North Las Vegas than they are on the Las Vegas strip. Grochowski, *supra* note 31.

399. Peter H. Aranson & Roger LeRoy Miller, *Economic Aspects of Public Gaming,* 12 CONN. L. REV. 822, 844 (1980). Aranson and Miller conclude that, with perfect competition, only a small number of experienced and knowledgeable slot machine users would be required to cause the payback percentages of different casinos to converge, but, because of the requirement that a casino have a sizeable bank to avoid the possibility of being wiped out, there would not be perfect competition and a smaller number of larger casinos would exist, with higher prices than perfect competition would provide. *Id.* at 844-45.

400. *See* Eadington, *supra* note 65, at 185 (reviewing existing economic studies regarding the social costs of gambling).

401. *See generally id.*

402. *Id.*

C. "Truth In Gaming" Should Be Enacted Federally

States could and should pass "Truth in Gaming" acts to help their citizens avoid the dangers of problem gambling. Gambling regulation has traditionally been the province of states, rather than the federal government.[403] State enactment of such informational regulation could give a state's gambling industry a competitive advantage over nearby states that do not require such price disclosures as gamblers may be willing to cross state lines to have access to slot machines with clearly marked prices and that allow them to track their gambling.[404] If Maryland, for example, were to enact "Truth in Gaming" laws, it could gain players from surrounding states who prefer to know the hold percentages of the machines they play and desire the convenience of smart card technology.

"Truth in Gaming" should be passed on the federal level, however, for several reasons. Dependent as they are on gambling revenues, states would probably resist enacting any regulation that might decrease gambling, even by problem or pathological gamblers.[405] Secondly, the form of the disclosures should be standardized on a national basis, so that a gambler can more easily understand the disclosures, wherever she finds herself vacationing or otherwise traveling and gambling.[406] Federal regulation could also mandate the standardization that would be required for a universal smart card, while such standardization would be more difficult if regulation were done on a state by state basis.

Perhaps most important is that a federal enactment would avoid the difficulties posed by Indian casinos.[407] The Supreme Court, in *California v. Cabazon Band of Mission Indians*,[408] held that "tribal sovereignty is dependent on, and subordinate to, only the Federal Government, not the States . . . ."[409] Therefore, individual states could, with

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403. Koenig, *supra* note 172, at 1059.

404. *See* Benston, *supra* note 74 (noting that California and Nevada already compete for customers crossing state lines).

405. *See supra* notes 23-27 and accompanying text (discussing the income that states receive from gambling).

406. *See supra* notes 319-322 and accompanying text (discussing the importance of standardized disclosures). A huge number of gamblers travel in order to gamble; New Jersey reported in 1998 that 34 million annual visitors arrived in Atlantic City, 31 percent by bus. N.J. CASINO CONTROL COMM'N, *supra* note 233, at 26.

407. *See* California v. Cabazon Band of Mission Indians, 480 U.S. 202, 221-22 (1987) (requiring that state regulations of Indian reservations be supported by a congressional mandate, but noting that Congress may regulate the reservations as any other entity).

408. *Id.*

409. *Id.* at 207 (quoting Washington v. Confederated Tribes of Colville Indian Reservation, 447 U.S. 134, 154 (1980)).

very limited exceptions, apply their laws to tribal Indians on reserva-
tions only if Congress has given express consent to do so.[410] Under
Cabazon, a state could regulate gambling on reservations only if it
barred that form of gambling altogether.[411]

In response to *Cabazon*, and to give states some measure of con-
trol over Indian casinos while forcing them to negotiate with the In-
dian tribes, Congress passed the Indian Gaming Regulatory Act
(IGRA)[412] that set up a system by which Indian tribes could operate
casinos only after negotiating compacts with the states.[413] Those com-
pacts would contain the restrictions and regulations to which the In-
dian tribes agreed.[414] Because many states have already negotiated
their compacts with the Indian tribes operating casinos in the state
and those compacts can last for decades and restrict renegotiation, it
would likely be a difficult and lengthy process for the state to renegoti-
ate the compact.[415] If "Truth in Gaming" is to arrive soon, it will likely
do so at the federal, and not the state, level.

Though gaming regulation has been considered the province of
the states, the federal government has a long history of gaming regula-
tion. In 1950, Congress passed the Johnson Act, which prohibited the
use of interstate commerce to transport gaming devices and the use of
communications systems for gaming purposes.[416] This act was in-
tended, however, to aid states in regulating gambling and allowed
them to be exempted from the act.[417] Other federal regulation of
gambling includes taxing gambling businesses[418] and winnings,[419] en-
abling the Federal Bureau of Investigations to investigate suspected

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410. *Id.* at 207, 215.

411. *Id.* at 208-12; *see also* Rand, *supra* note 173, at 51.

412. 25 U.S.C. §§ 2701-2721 (2000).

413. *Id.*

414. *See* Oliver Kim, *When Things Fall Apart: Liabilities And Limitations of Compacts Between
State and Tribal Governments,* 26 HAMLINE L. REV. 49, 53-68 (2002) (discussing the legal
difficulties inherent in the compact process).

415. The compacts that California signed with Indian tribes in 1999 are not set to expire
until 2019, and the only issues that can be reopened before then are "off-reservation envi-
ronmental impacts and revenue-sharing and slot machines." Erica Werner, *Davis Seeks Tri-
bal Talks, Casino Agreements: He Wants to Renegotiate to Increase Revenue Sharing with State,* SAN
JOSE MERCURY NEWS, Apr. 1, 2003, at 13A.

416. 15 U.S.C. §§ 1171-1178 (2000).

417. *See* Mike Roberts, *The National Gambling Debate: Two Defining Issues,* 18 WHITTIER L.
REV. 579, 588-89 (1997) (citing H.R. REP. No. 81-2769, (1950), *reprinted in* 1950
U.S.C.C.A.N. 4240, 4242, for legislative intent, and 15 U.S.C. § 1172 (1988 & Supp. 1992)
for the exemption from the statute).

418. 26 U.S.C. §§ 4401-4424, 4901 (2000).

419. 26 U.S.C. §§ 61, 74 (2000).

illegal gaming through wiretaps,[420] regulating the use of mails for gambling materials or lotteries,[421] prohibitions against bribing athletes,[422] and racketeering in interstate commerce,[423] among others.[424] This long history of federal regulatory efforts involving gambling and states' self-interest in promoting gambling and failure to mandate price disclosure justify federal intervention to require such disclosure.

D. Application of "Truth in Gaming" to Games Involving Skill

Many casino games are not pure games of chance, but rather the outcome of the game depends at least in part on the strategy of the gambler.[425] For example, video poker allows a gambler to choose which digital cards to hold and which to discard, receiving new cards in return.[426] The average return that a player can expect varies dramatically based on the skill level of the player, as well as the player's ability to concentrate during a given game.[427] On a video poker machine that would yield on average 97.5% returns for perfect play, an average player might expect to achieve a payback percentage of 92% or lower.[428] In such skill-based games, the casino should disclose the average hold percentage and hold amount generated by the average player over the life of the machine, rather than the cost for perfect play. It would be misleading to disclose to the average player only the ideal hold percentage or hold amount, as normal players are likely to lose more than the perfect play numbers would suggest.

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420. 18 U.S.C. § 2516 (2000).

421. 18 U.S.C. §§ 1301-1302 (2000) (regulating the use of mails for conducting a lottery); 39 U.S.C. § 3005 (2000) (giving the U.S. Postal Service the power to seize certain materials related to gambling from the mails).

422. 18 U.S.C. § 224 (2000).

423. 18 U.S.C. §§ 1952-1953 (2000).

424. *See* Roberts, *supra* note 417, at 588-89 (listing federal regulations of gambling).

425. *See* Aranson & Miller, *supra* note 399, at 829 (distinguishing pure games of chance, such as roulette, the outcomes of which are determined by "some kind of randomizing device," and games of strategy, such as chess, which depend on the ability of the player to make decisions under conditions of uncertainty, and games that mix the two, such as poker, where strategy plays a large role, but the element of chance, determining which cards a player receives, is also important).

426. Weber & Scruggs, *supra* note 117, at 626.

427. *See* Dancer & Compton, *supra* note 118 (noting that the payout percentage for many video poker games nears 100% if the player plays perfectly).

428. FRANK SCOBLETE, GUERRILLA GAMBLING: HOW TO BEAT THE CASINOS AT THEIR OWN GAMES! 207-08 (1993). These figures come from the interview of an anonymous "casino slot executive" and so, may or may not be accurate. *Id.*

VIII. OBJECTIONS TO REQUIRING PRICE DISCLOSURE
IN THE GAMBLING INDUSTRY

The gambling industry will likely object to regulations requiring it to post the average costs of its games or disclose information about gamblers' losses to them based on claims: (1) that the cost of the regulations will drive up the price of gambling, increasing the harm to gamblers while doing little to benefit consumers;[429] (2) that gamblers would prefer in many instances not to know the price of different casino games;[430] (3) that the disclosure of price would be too complicated for consumers to understand;[431] and (4) that this disclosure may violate gamblers' financial privacy.[432]

The cost objection will require some study to answer conclusively, in that it is difficult for a casino outsider to ascertain definitively how much this regulation will cost to implement. However, judging from the publicly available evidence, it does not appear that the cost will be prohibitive.[433] Given that the newest slot machines are built around computer-driven touch screens, designing and programming the new machines to provide price information should not be enormously expensive.[434] Even existing machines might be reprogrammed. Truth in Gaming regulation could grandfather in existing machines that could not easily be altered, simply requiring these older machines to have stickers affixed to them bearing accurate hold percentages. Then, after some period of time has passed to allow electronic gaming machine manufacturers to change the programming and design of their computer-driven machines, casinos would be permitted to install only those new machines that displayed the hold percentages and hold amount for the sum wagered, and that allowed gamblers to access their win and loss records either directly from the casino's records or through the gambler's own smart card.

Many casinos already obtain and store the data that would be required to give individual gamblers their net wins and losses record and have assembled databases that could easily be accessed to provide

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429. *See* Associated Press, *supra* note 149.

430. *See* Weinert, *supra* note 154 (noting that after regulators allowed publication of payout odds some casinos exploited the shift by running ads in which they claimed to have the "loosest slots").

431. *See supra* notes 112-113 (discussing the complexity of calculating payout percentages).

432. *See* Binkley, *supra* note 373 (noting that casino records on customers can be subpoenaed).

433. *See* Higgins, *supra* note 133 (noting that modern slot machines are designed for compatibility with all casino systems, which makes the transfer of information easy).

434. *Id.*

this information to the consumer.[435] Even if this information initially might not be available from each slot machine, requiring the casinos to erect a few kiosks with machines that could read their customers' slot club card or smart card and display a report would not be a substantial expense given the huge profits that casinos reap from their electronic games. Small slot machine operators would likely argue that assembling such a database would be too expensive for them; therefore, the requirement that casinos give gamblers access to their slot club information should likely be limited only either to casinos or chains with a minimum number of slot machines or to any casino that tracks its customers through slot clubs. However, even small slot machine operators should be required to buy only those new machines that can read and write to smart cards.

The second objection, that some gamblers prefer not to know their chances of winning or losing, may be dealt with by allowing each casino to keep a certain percentage of its tables, perhaps 10% initially, as "mystery machines." For these machines, the casino would not be required to disclose the average losses per coin but rather only that the machine is not so marked. If individual gamblers wanted to play machines that were not marked, they could do so. The casinos should be barred, however, from advertising, offering, or guaranteeing higher payback rates on their mystery machines in an effort to subvert the disclosure remedies by ensuring that gamblers only wanted to play games without disclosures.

Also, the use of tracking tools like smart cards should be entirely voluntary for gamblers. A gambler should be given the option of using a slot club card that does not allow her to access her own gambling records. However, casinos should be prevented from attempting to coerce gamblers into using only non-tracking slot club cards.

Casinos will likely argue that price information for slot machines is too difficult to understand and that they should not be required to spend money to tell gamblers information that gamblers will not comprehend or use.[436] Such an argument would fly in the face of evidence that gamblers are eager to acquire price information for slot machines, purchase books and magazines searching for that information, and are price sensitive to the extent that they can ascertain price.[437] Additionally, it goes against the most basic principles of con-

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435. *See* Barfield, *supra* note 5 (detailing the large amount of information that casinos already compile through voluntary casino clubs).

436. *See supra* notes 102-107 and accompanying text (discussing the difficulty in calculating price information).

437. *See supra* notes 167-168 and accompanying text.

sumer protection for a business to argue that its price structure is diffi-
cult to understand, and therefore, it should not have to disclose its
prices to consumers.

Casinos may also argue that providing win-loss statistics to gam-
blers may cause privacy concerns, given the chance that this informa-
tion might fall into the hands of third parties.[438] For example, once
betting information is available to gamblers, it might be sought in dis-
covery in a divorce action. However, these privacy concerns are al-
ready present, as can be demonstrated by the recent outing of William
Bennett as a heavy gambler.[439] Although Bennett no doubt thought
that the records of his wins and losses was a matter between him and
his casino, those records were leaked to news media and were the sub-
ject of wide comment.[440] Truth in Gaming legislation could include
privacy protections greater than are currently in place, regulating
when and how casinos may disclose the gambling information that
they keep. Furthermore, systems of encryption and password protec-
tion could be put into place to protect the privacy of borrowers.

Casinos would likely argue that gamblers enjoy playing slot ma-
chines more when they do not think about losing.[441] However, a
counter argument would be that gamblers could enjoy playing slot
machines more when they know how much on average they might
expect to lose on a particular game, so that when they lose less than
the average, they would feel like winners. And if casinos were forced
to compete based on price and lowered their prices as a result, gam-
blers would lose less money on average and enjoy gambling more.

Casinos also will likely argue that price information is not useful
for slot machine players because it would take a significant number of
plays for the individual player's average loss to approach the hold per-
centage of the machine.[442] Because a player might lose or win much
more or much less than the average, casinos would object that giving
the average loss adds little useful information to the gambler.[443] Fur-

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438. *See* Binkley, *supra* note 373 (noting that casino customer records can be
subpoenaed).

439. Katharine Q. Seelye, *William Bennett Reportedly Lost Millions Gambling,* ATLANTA J.-
CONST., May 3, 2003, *available at* http://www.ajc.com/news/content/news/0503/03ben
nett.html (last visited Jan. 8, 2004).

440. *See id.* (citing "40 pages of internal casino documents" indicating that Bennett lost
more than $8 million by gambling).

441. *See* Watt, *supra* note 144 (noting that many seniors just play slots for fun).

442. *See supra* note 106 and accompanying text (detailing the method used to calculate a
hold percentage).

443. For example, the Australian Gaming Manufacturers Association argued that, "[f]or
an individual player, the return ratio is a very imprecise measure. For either game [of two
games approved for use in New South Wales] to tend within plus or minus 1% of the

thermore, the gaming industry is likely to argue that it can arrange two hypothetical games so that it would be possible to have a higher probability of breaking even during a given number of wagers on the machine with a higher average cost than on the lower average cost machine.[444]

Neither argument is convincing, however, because, as noted by the Australian Productivity Commission, it is

> apparent that over a reasonable period of time—say a month and certainly a year—the determinant of the financial outcome of playing a gaming machine is almost exclusively its player return. The standard deviation as a share of the mean player losses becomes much smaller after a large number of trials.[445]

Therefore, the more often a gambler plays, the more likely her losses are to conform to the hold percentage of the machines she plays.[446] A slot machine player who conducts more than 500 wagers an hour for 200 hours, spread over several months, will have played more than a hundred thousand times and will almost certainly have an individual loss percentage close to the hold percentage of the machines she

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expected average would require a sample of 5 million games." AUSTRALIAN PRODUCTIVITY COMM'N, *supra* note 339, at 16.15.

444. *See id.* For example, if one dollar machine has a one in a million chance of repaying two million dollars, then it would, on average, return two dollars for any dollar wagered. If another dollar machine has a 99% chance of returning only the dollar bet, and 1% chance of returning nothing, then it has a hold percentage of 1%, much worse than the average gain percentage of 100% for the other machine. The casino industry would argue, though, that for a small number of plays, a player is much more likely to break even with the more expensive machine, as it will merely return the player's wager, while the other machine will almost always return nothing. *See id.*

445. *Id.* at 16.16

446. This convergence toward the hold percentage is due to the Law of Large Numbers, which notes that for a series of random events, each new event remains random and is not affected by what precedes or follows it. *See* Dennis O'Brien, *Winning at Slots; What are the Odds?*, BALT. SUN, Mar. 10, 2003, at 6A. However, as the number of random events mounts, the sum of the results becomes predictable and converges on average likelihood of each result. *Id.* For example, while a gambler playing a machine with a 5.26% hold percentage has almost a third of a chance of being ahead after ten wagers, it would be virtually impossible for the gambler to be ahead after 10,000 wagers, but it is likely that the player's individual loss percentage would be within a few percentage points of the machine's hold percentage. *See* HANNUM & CABOT, *supra* note 103, at 12-13. Hannum and Cabot calculate that the chances of a gambler being ahead after 10,000 wagers against a house advantage of 5.26% is 0.0000065%, over fifteen million to one. *Id.* If a person plays a slot machine with a hold percentage of 6.97% 10,000 times, there is less than a 40% chance that the person's individual hold percentage will be under 6%. If she plays 100,000 times, there is less than a 15% chance her individual hold percentage will be less than 6%, and at 1,000,000 plays the chances are less than 0.1%. *See* Milligan, *supra* note 107, at 184-86.

plays.[447] The provision of accurate price information is most helpful, then, to the players who need it the most—the frequent and fast slots players who are most likely to be problem gamblers or risk becoming problem gamblers.[448]

Furthermore, gambling consumers have many different pieces of information at their disposal to decide how much to gamble, where to gamble, and on which machines.[449] They may prefer machines with themes matched to television shows, or machines near the door of the casino. The hold percentage of any machine that gamblers might choose is surely among the pieces of information they should be allowed to consider in making their decision.[450]

IX. CONCLUSION

Gambling is a growing industry, and with the spreading legalization of gambling throughout the country, the amount of gambling is determined primarily by the decisions of individual gamblers, not by the state. To make those decisions efficiently, individual gamblers should be given clear, accurate, and timely information about the true costs of gambling. Additionally, they should be provided that information in a format they can easily use and understand and that is tailored to their individual needs and uses.

If the gambling industry wishes to be treated as a legitimate industry, it must act like one. The most basic step toward legitimacy is disclosing its prices to consumers, not hiding them under a veil of secrecy. This disclosure, along with assisting individuals track their winnings and losses, will not only aid recreational gamblers, but may also help pathological gamblers, as present research suggests that informational remedies may aid problem and pathological gamblers in attempts to control their gambling. At the very least, effective price disclosure will alert problem or potential problem gamblers to the risks they run and the costs they are paying. To be rational consumers, gamblers should be given adequate price information. Then, they can determine whether the gamble is worth the price.

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447. *See* HANNUM & CABOT, *supra* note 103, at 171 (stating that a casino might roughly estimate that a slot player will average five hundred wagers per hour); Watt, *supra* note 144 (noting that some elderly players play for extended periods). "Their member cards locked into place, the women sit tethered by their cords to the machines for hours at a time." *Id.*

448. *See* Gurnett, *supra* note 98 (noting that "[r]apid response items, such as . . . video slot machines, accelerate [compulsive gambling disorders]").

449. *See supra* notes 140-190 (discussing information on slot machines available to gamblers).

450. *See* AUSTRALIAN PRODUCTIVITY COMM'N, *supra* note 339, at 16.15 (arguing that the hold percentage of a machine should be available to consumers).