

**Testimony of Kurt Eggert
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Before the

**House Energy and Commerce Committee
Subcommittee on Commerce, Manufacturing, and Trade**

At a Hearing Entitled:

“Internet Gaming: Is There a Safe Bet?”

**Rayburn House Office Building, Washington, DC
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Witness Background Statement

Kurt Eggert is a Professor of Law at Chapman University School of Law in Orange, California, where he teaches gambling law, among other courses, and directs the Alona Cortese Elder Law Center. As a law professor, he has testified before Congressional committees of both the House and Senate, and formerly was a member of the Federal Reserve Board's Consumer Advisory Council, where he chaired the Subcommittee on Consumer Credit. Before joining the Chapman faculty, Professor Eggert was a staff attorney at Bet Tzedek Legal Services, a non-profit legal services provider, and also an adjunct professor at Loyola Law School in Los Angeles, California. Professor Eggert holds a J.D. from the University of California at Berkeley, Boalt Hall School of Law, and a B.A. from Rice University. While clinical programs at Chapman University School of Law have received Federal grants unrelated to the subject matter of this testimony, Professor Eggert has not received any Federal grants nor has he received any compensation in connection with his testimony.

Executive Summary

This testimony examines the role of consumer protection in the gaming industry, with special attention to slot machines and internet poker, which will likely be among the most popular forms of internet gambling, should they be legalized. For slot machines, a crucial piece of information that a gambler should have, whether playing in land-based casinos or on the internet, is the hold percentage of the slot machines, which represents the true average cost of the slot machine. Gamblers should have access to this information, both while they shop among their gambling opportunities, and also while they are gambling, so that they can make an informed decision where, whether, when, and how much to gamble. Study should continue on the use of smart cards to allow gamblers to track their winnings and losses, and to institute limitations on the amount or time they spend gambling, or to enforce a time-out from gambling.

Consumer protection in the realm of Internet poker is challenging, in that the greatest threat to a recreational gambler's pocketbook comes from other, more skilled gamblers, especially those who use data-mining techniques to identify and target weaker players. Recreational poker players are also threatened by the development of ever-more sophisticated poker robots, or "bots," computer programs unleashed on the Internet to defeat weaker human players. With advances in Artificial Intelligence, poker "bots" will become more formidable opponents, and poker sites will likely have difficulty preventing poker "bots" from playing on their sites, causing problems to the gamblers they take on. The testimony proposes one possible solution to this problem.

Madam Chairwoman, Members of the Committee:

Good morning. My name is Kurt Eggert. I am a Professor of Law at the Chapman University School of Law in Orange, California, where I teach courses in gambling law and legal remedies, among others, and direct the Alona Cortese Elder Law Center. The views I express today are my own, however

Thank you for the invitation to discuss the issues involved in legalizing various forms of Internet gambling. I would like to focus on the consumer protection issues involved. I have focused much of my career on consumer protection issues, both as a practicing attorney and as a law professor. Much of that work has been done in the financial services industry. I have served on a board that advises the Federal Reserve Board on consumer financial issues and testified to Congressional committees regarding lending and securitization. I also teach gambling law and have written and lectured internationally on gambling regulation, again with a focus on consumer protection issues.¹

¹ See Kurt Eggert, Truth in Gaming: Toward Consumer Protection in the Gambling Industry, 63 Maryland Law Review 217 (2004), available at SSRN: <http://ssrn.com/abstract=901306>, for a general discussion of consumer protection in the gambling industry, and Kurt Eggert, Lashed to the Mast and Crying for Help. 36 Loyola of Los Angeles Law Review 693 (2003), available at SSRN: <http://ssrn.com/abstract=905062>, discussing autonomy effects of self-exclusion programs for casinos.

Introduction:

“Were you wondering was the gamble worth the price.”

As Congress considers measures to legalize various forms of Internet gambling, it should include in any such legislation measures that would provide sufficient consumer protection for those who would gamble online. By legalizing Internet gambling, we would be causing perhaps the greatest single increase in legal access to gambling ever. With smart phones, many Americans carry the Internet in their pockets, and so gambling would for many always be just a click away, on the train, in the Laundromat, in the school library. Making such a great change should be done with great caution. In legalizing any form of Internet gambling, we should have processes in place to minimize the harm that such gambling might cause, but we should also do our utmost to ensure that gamblers are making informed choices when they gamble, and that they have all the tools needed to make an informed choice as to whether, when, where, and how to gamble. They should have all of the information they need to be good shoppers among their gambling opportunities, and to determine whether the cost of the gambling is worth the price of the entertainment they are likely to receive from it.

In my testimony, I will discuss what consumer protection means in the context of the gambling industry, and how a basic element of consumer protection, mandating accurate and timely price disclosure, is largely missing from slot machine regulation. Then, my testimony will turn to consumer protection for Internet gambling, and discuss the special challenges that are involved in regulating Internet poker.

In the United States, consumer protection in the gambling industry is too much like the weather. While people talk about it, little is done about it. When it comes to perhaps the greatest profit center of the casino industry, slot machines, real consumer protection is largely absent in American casinos. Recreational gamblers are prevented from shopping based on price, and often find themselves sitting in front of a slot machine with only a vague idea of how much, on average, their recreation might cost them. Casinos have at their hands all of the information gambling consumers need to make good decisions about how, when, or whether to bet on slot machines, but because the state regulatory agencies that govern casinos appear more interested in protecting casino profits than consumer decisions, slot machine users can typically at best only guess at the true cost of their preferred form of recreation.

If Internet gambling is to be legalized, the gamblers who choose to use this form of gambling should be given sufficient information to be good shoppers, to be able to shop based on the price of the gambling, to recognize the risks and rewards that they face in gambling, to fend off gambling predators, and to make an informed decision of whether the gamble is worth the price.

What is Consumer Protection?

In American casinos, a primary purpose of gambling regulation is to instill confidence in consumers (the gamblers who would use the casinos) that the casinos are honest and fair, and that the gamblers will be paid their winnings and will not otherwise be

cheated.² This confidence then encourages patronage of a state's casinos, as gamblers feel protected by state regulation. State regulation has allowed the gambling industry to clean up its reputation and remove the stigma of organized crime, as the casino are primarily owned and operated by large, publicly traded corporations.³

Honesty in the gaming industry requires that gamblers be protected from "fixed" or inconsistent games and that the outcomes of games of chance depend on truly random events, whether from a deck of cards or the spin of a slot machine's reel, that are not controlled by the casino. Fairness, by comparison, focuses, at least in the eyes of the gambling industry, on the advantage or edge the casino has over the gambling patron, and whether the casino extracts a fair or unfair, excessive return from the amount wagered by the patron.⁴ Games that cost gamblers too much are unfair, while games that are fixed or fail to be sufficiently random are dishonest.

True consumer protection requires more than mere "fairness" and "honesty" as described above, however. Consumer protection is based on the fundamental idea that consumer purchases should, to the extent practicable and desired by consumers, be the product of voluntary, informed, and competent decisions by consumers among

² Anthony N. Cabot & Robert C. Hannum, Gaming Regulation and Mathematics: A Marriage of Necessity, 35 J. Marshall L. Rev. 333, 334 (2002).

³ William R. Eadington, The Economics of Casino Gambling, 13 J. Econ. Persp. 173, 175 (1999).

⁴ For a discussion of "fairness" and "honesty" in the gambling industry, see Anthony N. Cabot & Robert C. Hannum, Gaming Regulation and Mathematics: A Marriage of Necessity, 35 J. Marshall L. Rev. 333, 334 (2002).

various possible and competing options.⁵ Informed choice is at the heart of capitalism, and capitalism works when both sides to a transaction can determine whether they benefit from the deal, and so whether the transaction creates a net benefit to both.⁶

Informed choice by consumers also promotes healthy competition between product and service providers, as they are forced to compete to provide the best product at the best price. The goal of consumer protection, then, is to encourage consumers to be “good shoppers,” and to maximize the product or service value they receive while minimizing the price they pay. Consumer protection is also designed to protect consumers from sellers’ sharp practices that might take advantage of them or reduce their ability to make informed decisions.

An essential element of consumer protection is “consumer sovereignty,” the idea that the provision of consumer products and services should be driven by consumer demand and consumers’ decisions, not governmental or industry mandate. Where informed consumer preference governs the marketplace, competition is generally based on quality, convenience, and price, and less effective suppliers of products and services tend to be driven out of the marketplace by stronger competitors, maximizing

⁵ Milton Friedman noted that the test of whether a transaction benefits both parties is if the transaction is bilaterally voluntary and informed. See Milton Friedman, *Capitalism and Freedom* 13 (1962).

⁶ “Classical economic theory mandates that, in order for the invisible hand of the free market economy to work, consumers must at all times make rational choices. The ability to make rational choices requires the consumer to have access to perfect information. To the extent that businesses engage in deceptive or unfair acts or practices, they interfere with consumer access to perfect information, thereby interfering with the operations of the market.” J.R. Franke & D.A. Ballam, *New Applications of Consumer Protection Law: Judicial Activism or Legislative Directive?*, 32 SANTA CLARA L. REV. 347, 358 (1992).

the value to consumers. Because consumers are normally the best judges of what they want and how much they are willing to pay, they are the ultimate arbiters of the market, and should be provided the information they need for their decisions, though regulatory regimes should also recognize the limits of consumer rationality and decision-making.⁷ By comparison, the providers of products and services are not likely to provide that information where it will decrease their profits or the size of the overall market. For example, cigarette manufacturers were loath to disclose the harm caused by cigarettes until forced to, even if their individual product might have had the fewest cancer-causing attributes.

Consumer Protection vs. Harm Minimization

Many researchers into the effects of gambling on individuals and society discuss “harm minimization,” a concept that comes from medical research such as studies of how to stop the spread of hepatitis among drug users.⁸ While harm minimization and consumer protection are complementary ideas, and there is often much overlap between them, they spring from separate ideas. Harm minimization is the attempt to reduce the harm, negative consequences or health threat caused by an activity without

⁷ See, Joel Waldfogel, Does Consumer Irrationality Trump Consumer Sovereignty?, 87 Rev. Econ. & Stat. 691, 691 (2005), suggesting that while consumer rationality and sovereignty occupy central roles in economic theory, empirical evidence demonstrates the limits of consumer rationality, and that actual behavior “is constrained by bounded rationality, bounded willpower, and bounded self-interest”.

⁸ Alex Blaszczynski, et. al., The Assessment of the Impact of the Reconfiguration on Electronic Gaming Machines as Harm Minimisation Strategies for Problem Gambling, 2001, at 24.

necessitating the prohibition of or abstinence from that activity.⁹ In the gambling context, the purpose of harm minimization is to reduce the negative effects of gambling and especially of problem gambling and to reduce the incidence of problem and pathological gambling. Those negative effects include damage to the physical, mental, and emotional health and finances of the gambler and his family, as well as broader economic, health and social problems that widespread gambling may cause.

Harm minimization focuses on problem and pathological gamblers because they are the ones most likely to suffer significant harm from gambling, while recreational gamblers may instead derive entertainment, social activity, and mental stimulation from gambling. Examples of harm minimization strategies include self-exclusion programs and limitations on times, places and play speed for gambling. Researchers are busily studying the effects of harm minimization strategies, both for land-based casinos and for on-line versions.¹⁰ Some have cautioned, though, that harm minimization should be done with an eye to preserving the pleasurable aspects of gambling for recreational gamblers and not inflict unnecessary damage to the profitability of the gambling industry.

By comparison, consumer protection focuses more on the recreational gambler, though aspects of consumer protection could have benefits for problem and

⁹ Alex Blaszczyński, et. al., *The Assessment of the Impact of the Reconfiguration on Electronic Gaming Machines as Harm Minimisation Strategies for Problem Gambling*, 2001, at 23.

¹⁰ See, for example, Broda, et. al., *Virtual harm reduction efforts for Internet gambling: effects of deposit limits on actual Internet sports gambling behavior*, *Harm Reduction Journal* 2008, 5:27, finding that “Deposit limits might be necessary harm reduction measures to prevent the loss of extremely large amounts of money and cases of bankruptcy” for Internet sports gambling.

professional gamblers alike. This distinction between harm minimization and consumer protection is important because, while some have argued that harm minimization strategies should have a scientific basis to prove that they reduce the negative effects of problem gambling, consumer protection should not depend on scientific proof of effect on problem gamblers.¹¹

Goals and Tools of Consumer Protection in Gambling

The current regime of gambling regulation, with its focus on guaranteeing “fairness” and “honesty,” but not much more, falls woefully short of providing sufficient consumer protection for gamblers, at least concerning the casino industry’s most popular product, the slot machine. Gamblers, like other consumers, should have access to the information they need in order to shop based on price, quality, and convenience. While casino gamblers can determine for themselves the convenience of their various gambling options, and can discern many aspects of the quality of casinos, such as their physical condition, their promotional offers, and their food options, casinos keep gamblers at least somewhat in the dark about a primary aspect of slot machine gambling, namely the true and accurate price of slot machines. All too often, gamblers are given either no information on the true price or only vague information, and so casinos can in many cases avoid competing with each other based on the prices of their slot machines.

¹¹ For the argument that harm minimization in the context of gambling should be based on scientific experiment, see Alex Blaszczynski, et. al., A science-based framework for responsible gambling: the Reno model. *J Gambling Stud.* 2004 Fall;20(3):301-17.

Determining the proper consumer protections for slot play would be crucial to legalizing Internet gambling generally. Slot machines are among the most profitable and popular games in casinos. While overall exact figures on gambling profits broken out by specific types of play are difficult to obtain, it has been estimated that the average casino generates 65% of its profits from slot machines.¹² Given their popularity and profitability in land-based casinos, it is reasonable to assume that were Internet gambling to be broadly legalized in the United States, slot play would be an important part of the on-line gaming industry.

While it might seem that casinos publicly mark the prices of various slot machines, be they nickel, quarter, or dollar slots, or larger denominations, the true price of slot machine play is not the amount that the gambler inserts into the machine, since essential to the game is that the slot machine on average retains only a percentage of the gamblers' bets and returns the rest to gamblers in the form of winnings. As one gambling commentator noted, "Gambling is a form of entertainment with an ingenious billing system."¹³ The amount the casino retains from the gamblers' wagers is the true cost of those wagers and the average amount the casino retains is the average cost of the wagers. While the amount that the slot machine retains may vary widely from one gambling session to the next, each slot machine is set to have a specific average amount that it retains, which in slot lingo is called the "hold

¹² Steve Bourie, Slot Machines, in American Casino Guide 29 (Steve Bourie ed., 2011).

¹³ Anthony Curtis, Gambling--What Does It Cost?, in American Casino Guide 6 (Steve Bourie ed., 2000).

percentage.”¹⁴ For example, one slot machine may be set for a hold percentage of 10%, while another might have a hold percentage set at 5%. While individual session outcomes will vary greatly, a gambler can expect to pay on average twice as much for using a slot machine with a 10% hold percentage than one with a 5% hold percentage. Therefore, the true average cost of any wager can be expressed in two ways, either (a) as the average percentage of each bet the gambler loses and hence, the casino wins, which is the hold percentage, or (b) as the average amount lost by the gambler for a bet of a given size, which could be termed the “average hold amount.”¹⁵ For example, a \$100 bet on a machine with a 5% hold percentage would have a \$5 average hold amount.

Consumer guides to the gambling industry often refer to a “payback percentage,” which is the amount that slots, on average, return to gamblers, with one guide noting that payback percentages in New Jersey average “close to 92 percent” while those in Nevada average “slightly less than 94%.”¹⁶ However, doing rapid mental calculations with payback percentages is more difficult than with hold percentages. For example, the difference between a 12% and a 6% hold percentage is more immediately obvious than that between an 88% and a 94% payback percentage. The payback percentage is

¹⁴ The New Mexico Gaming Control Board rules have defined “hold percentage” 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. Admin. Code tit. 15, § 1.8.7(K) (2003). “Hold percentage” also has another, more arcane meaning within the gambling industry concerning table games. Because in table games, such as blackjack, casinos have difficulty tracking the exact amount bet by gamblers and the flow of chips back and forth between gamblers and the dealers, they instead track the percentage that, on average, a casino should win from the “drop,” the amount that gamblers are prepared to put at risk in a game. See Robert C. Hannum & Anthony N. Cabot, *Practical Casino Math* (2001), at 43-45.

¹⁵ See, for example, James Walsh, *True Odds* 342-44 (1996) (describing the method of calculating expected value in the gambling context).

¹⁶ Steve Bourie, *Slot Machines*, in *American Casino Guide* 29 (Steve Bourie ed., 2011).

a bit confusing, like asking someone returning from Las Vegas how much money they did not lose.

Any adequate system of consumer protection regulation would require the disclosure of the hold percentage of slot machines, both in advance while gamblers are shopping among their various gambling opportunities and deciding whether to gamble, and also at the time of use, so that gamblers can determine, as they gamble, whether the pleasure and other benefits they receive from slot machine play is worth the average price. Thus, in addition to “fairness” and “honesty,” casinos should be required to have “transparency” in terms of accurate and timely disclosure of hold percentages of all games available to gamblers.

Disclosure of hold percentages is necessary because gamblers cannot effectively determine the hold percentages of slot machines themselves. Casinos could have two identical slot machines with widely varying hold percentages. For example, some slot machines are available with hold percentages ranging as wide as 2% to 15%.¹⁷ In other words, a slot machine could on average cost gamblers seven and a half times as much as an identical appearing machine sitting next to it, with no indication to customers. Gamblers cannot determine the hold percentages of machines with any accuracy even by playing them, as other factors, such as the hit percentage or the volatility of slot machines prevent any accurate estimation of the slot machines’

¹⁷ Steve Bourie, Slot Machines, in American Casino Guide 31 (Steve Bourie ed., 2011), noting the payback percentages available for IGT’s “Enchanted Unicorn.”

returns. For example, a slot machine set with high volatility, with infrequent but high jackpots, may be perceived as “tighter” than a machine with a higher hold percentage but more frequent pay-offs.¹⁸ While a gambler may have longer playing time, on average, on a lower-volatility machine, the more often the player gambles on slot machines, the more important the hold percentage will loom in determining the overall price of play.

In mandating the disclosure of price information such as hold percentages, gambling regulators should be mindful of the lessons learned in studies of how consumers process information in their shopping decisions. Unsurprisingly, research shows that information should be presented to consumers simply and in clear terms.¹⁹ If too much information is provided at once, consumers can become confused or disregard the information.²⁰ Consumers do better with information tailored to them and their specific needs,²¹ and with information disclosure standardized across an industry, so that they can become familiar with the method of information disclosure and compare products from different companies and in different settings.²² For slot machines, it is better to provide price information in terms of hold percentages than in odds or

¹⁸ Anthony F. Lucas & A. K. Singh, Estimating the Ability of Gamblers to Detect Differences in the Payback Percentages of Reel Slot Machines: A Closer Look at the Slot Player Experience, *UNLV Gaming Research & Review Journal*, 15:1, 17-36(2011).

¹⁹ Cass Sunstein, *Informing America: Risk, Disclosure, and the First Amendment*, 20 *Fla. St. U. L. Rev.* 653, 653, 668 (1993).

²⁰ See, for example, W. Kip Viscusi, Using Warnings to Extend the Boundaries of Consumer Sovereignty, 23 *Harv. J.L. & Pub. Pol'y* 211, 230 (1999).

²¹ 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).

²² See William M. Sage, *Regulating Through Information: Disclosure Laws and American Health Care*, 99 *Colum. L. Rev.* 1701, 1741 (1999) (explaining this in the context of health care).

probabilities, because many people have difficulty understanding odds and probabilities and using them to make mental calculations.²³

The information disclosure should be interactive, so that the consumer can see how changed behavior changes the average price of gambling. For example, some slot machines reduce their hold percentage by, for example, increasing the size of jackpots, if the gambler increases the size of each bet.²⁴ An informed gambler in such a circumstance would learn that while the hold percentage for the slot machine goes down if she bets more, the hold amount likely increases as the size of the bet increases. Therefore, the gambler could decide whether minimizing hold percentages or hold amounts is more important to her, and play accordingly. Ideally, gamblers would be able to learn the hold percentages of a casino's slot machines both before they enter the casino, so that they can shop effectively for the best price, and while they play, so that they can always have access to accurate price information while playing. Each slot machine should display its hold percentage and register the average hold amount each time a gambler places a wager.

Sadly, the states, in regulating gambling, have often failed miserably in mandating accurate and timely price disclosures. For example, in California, there is no

²³ See 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), stating that “[M]any consumers haven't the foggiest idea of how to work with independent and especially joint probabilities.” See also Vicki Abt et al., *The Business of Risk: Commercial Gambling in Mainstream America* 263 (1985), stating that “Odds and price are frequently confused by gamblers and even by the operators of commercial gambling businesses.” *Id.*

²⁴ Steve Bourie, *Slot Machines*, in *American Casino Guide* 32 (Steve Bourie ed., 2011).

requirement that the hold percentages for slot machines be disclosed in any way, and in fact the compacts signed by the state with the tribes that operate casinos appear to forbid the state from disclosing hold percentages even if it were to discover them.²⁵

In Nevada, the state releases overall payback percentages by region rather than by casino, and groups together slot machines and video poker games, making the information provided even less useful.²⁶ Nevada at one time considered but rejected the idea that slot machines display the odds of winning, as its then commissioner argued such information would “take away the mystery, the excitement and entertainment and risk of playing. . .” and that “there isn't an establishment that would agree with posting those odds.”²⁷ Perhaps only the gambling industry could convince its government regulators that its customers benefit from the lack of price disclosure and that they, rather than the regulator, should make that decision. New Jersey's record on hold percentage disclosure is little better. Until 2000, New Jersey casinos were barred by state regulation from revealing their hold percentages even if they wanted to, a ban casinos lobbied for so that they would not have to compete based on price.²⁸

²⁵ See, for example, Sec. 8.4 of the TRIBAL-STATE GAMING COMPACT Between The FORT MOJAVE INDIAN TRIBE, A Federally Recognized Indian Tribe, And The STATE OF CALIFORNIA, available at http://www.cgcc.ca.gov/documents/compacts/fort_mojave_compact.pdf, which seems to forbid the state from disclosing hold percentages from slot machines, even if it discovers them.

²⁶ Steve Bourie, Slot Machines, in American Casino Guide 244 (Steve Bourie ed., 2011).

²⁷ John Mangels, Computerized slot machines far removed from originals, Cleveland Plain Dealer, May 16, 2011.

²⁸ Patrick Jenkins, New Jersey Lifts Outdated Ban on Casino Slot Ads, Knight-Ridder Trib. Bus. News, July 7, 2000, at 1. See also, The Associated Press, State Will Allow Casinos to Advertise Their Odds, The Rec. N. N.J., June 17, 2000, at A14.

In addition to accurate price disclosure, gamblers should also have access to accurate information about the total price of their own gambling. Casinos already track the winnings and losses of their slot machine customers who apply for and use slot club cards, and use that record of the amount gambled by their customers to reward customers with complimentary rewards (comps) such as free or discounted rooms or food, or even cash back. Since casinos are tracking this information anyway, their patrons should have access to it, and in that way be able to determine whether they are obtaining sufficient value for their money, or if they are losing more money than the entertainment is worth.

Harm minimization efforts could also benefit from the use of smart cards by gamblers that would do more than just track wins and losses. If slot players were required to use a smart card to access a slot machine, those cards could be programmed to allow players to set loss limits by the day, week or month, or to give themselves mandatory cooling off periods where they are not able to gamble. Such a system is being used as an experiment in Nova Scotia, and appears to show promise, even among potential problem gamblers.²⁹

In addition to providing timely, accurate, and easy to understand price information for slot machines, an effective consumer protection regime would ban certain practices

²⁹ Focal Research Consultants Phase 1 Evaluation of The “My-Play” System: 2010 Regular VL Players Benchmark Survey, prepared for Nova Scotia Gaming Foundation. Available at: <http://www.nsgamingfoundation.org/uploads/Research/Phase%201%20My-Play%20Final%20Highlight%20Report%20Jan%2028%202011.pdf>

that might mislead slots players about their chances of winning. For example, slot machines have been programmed to show an artificially inflated number of “near misses,” where the machine indicates that the player almost won a jackpot, because the one symbol the player needed was right above or below the pay row. This might lead a player to continue playing in hopes of obtaining what seemed so close. Or slot machines can be programmed to show far more winning symbols as they spin than are actually one the “virtual reel” that determines the outcome, so that as the gambler watches the symbols flash by, winning a significant prize seems more likely than it really is.³⁰

Consumer protection issues in games of skill like casino poker are very different than for slot machine play. For poker games, a player’s returns depend in large part on the skill of the player’s opponents, something over which a casino has little control or even ability to track. Consumer protection plays out very differently in Internet poker, as will be discussed later in this testimony.

Internet Gambling Regulation

If gambling over the Internet becomes legal, it will pose some special challenges for gambling regulators. Some of those challenges are bound up in problems particular to the Internet, such as what a gambling site should do when a gambler, in the midst of a

³⁰ For a discussion of the use and abuse of apparent “near-misses” by slot machine manufacturers, see Kevin A. Harrigan, Slot Machines: Pursuing Responsible Gaming Practices for Virtual Reels and Near Misses, *Int J Ment Health Addiction* (2009) 7:68–83, DOI 10.1007/s11469-007-9139-8.

game, loses connection to the Internet. Because the Internet is international in scope, Internet gambling presents problems for dispute resolutions. If a gambler has a dispute with an Internet casino with computer servers across the country, where should any arbitration or litigation take place?

Internet gambling may also pose problems if its legalization leads to an increase in problem gambling or gambling addiction, a possibility that many researchers are examining now. It appears that Internet gambling may lead to, or at least accompany, a greater incidence of problem gambling. As noted recently, “Certain characteristics inherent to online gambling are decisive for this theoretical proposition [that Internet gambling is associated with “rather high” potential for addiction], such as the permanent availability and ease of access, the speed and broad range of games, the possibility to gamble anonymously without social control, and the cashless payment transactions.”³¹ More research is needed to tease out the causal implications, such as how much Internet gambling causes additional problem gambling versus how much problem gamblers are drawn to Internet gambling.³²

Regardless of which direction the causal chain leads, however, it appears that Internet gambling is ripe for effective harm minimization techniques. Some recent research indicates the promise of self-limiting or self-exclusion programs for Internet

³¹ Tobias Hayer & Gerhard Meyer, Internet Self-Exclusion: Characteristics of Self-Excluded Gamblers and Preliminary Evidence for Its Effectiveness, *Int J Ment Health Addiction* (2011) 9:296–307, at 296-7, DOI 10.1007/s11469-010-9288-z.

³² *Id.*, at 297.

gamblers, though more research is needed.³³ Internet gamblers might also benefit from pop-up messages encouraging them to be mindful of the amount of time and money they are spending gambling.³⁴ The information-gathering ability of Internet casinos might well prove useful in early identification of problem gambling, allowing early intervention where Internet gambling sites detect early signs of problem gambling.³⁵

Consumer Protection for Internet Slot Machine Players

Internet slot machines have many of the same consumer protection issues as land-based slot machines. However, for internet slots, the hold percentage looms even larger in a customer's decision whether to gamble at a particular site. Unlike land-based casinos, which may feature better or worse food or atmosphere or friendlier employees, there is little to differentiate one internet slot operation from another, other than the hold percentage, hit percentage or volatility. The key for consumer protection would be to mandate adequate provision of information, so that internet casinos have to compete against each other based on price.

³³ Sarah E. Nelson, et. al. Real Limits in the Virtual World: Self-Limiting Behavior of Internet Gamblers, *J Gambl. Stud* (2008) 24:463–477. See also Tobias Hayer & Gerhard Meyer, Internet Self-Exclusion: Characteristics of Self-Excluded Gamblers and Preliminary Evidence for Its Effectiveness, *Int J Ment Health Addiction* (2011) 9:296–307, DOI 10.1007/s11469-010-9288-z.

³⁴ See, Sally M. Monaghan: 'Responsible gambling strategies for Internet gambling: the theoretical and empirical base of using pop-up messages to encourage self-awareness', *Computers in Human Behavior*, (2009) vol. 25, no. 1: 202-207.

³⁵ Joerg Haefeli, et. al. (2011): Early detection items and responsible gambling features for online gambling, *International Gambling Studies*, DOI:10.1080/14459795.2011.604643, available at <http://dx.doi.org/10.1080/14459795.2011.604643>.

Consumer Protection for Internet Poker Players

In poker, it is difficult for online players to determine the honesty of the game. At a casino, poker players might watch the dealer for suspicious behavior, and at least try to hear or see whether the dealer is giving some players inside information, though there are techniques by which unscrupulous dealers can cheat players. For Internet games, players have great difficulty in detecting cheating by the casino. For example, an Internet casino could easily allow chosen players to view other players' down (or "hole") cards, and so give favored players an advantage, or rig the game to deliver better cards to chosen players. Similarly, employees or former employees of an online casino could have installed a "trapdoor" in the casino's poker software that allows them to gain control over some functions of the site and so while playing poker, view their opponents' down or "hole" cards. In two related Internet poker scandals, players were able to cheat their opponents by being able to view their hole cards.

One Internet poker site admitted that its software had been cracked, and refunded \$1.6 million to dozens of cheated players. This fraud might have gone undetected had the cheater not taunted one of his victims, goading the victim into investigating, and if the cheater had not failed to lose enough games that the

cheater's winnings did not seem entirely improbable.³⁶ When poker players investigated the apparent cheating, at first they were met with stonewalling from the Internet poker site. Even when the poker site admitted that cheating had occurred and made refunds, the site reportedly refused to disclose the name of the cheater or turn him over for prosecution, and instead reportedly cut a deal with the cheater to disclose the methods used.³⁷

In another case, another poker site admitted that some of its former employees had installed a "trap door" in the site's software that secretly allowed them to view players' hole cards, allowing them to rack up incredible victories in high stakes games. Again, the cheating was caught by other online gamblers, and likely only because the cheaters behaved recklessly, making "one improbable bet after another, yet winning most hands," and so the improbability of the wins alerted other players.³⁸

A challenge in consumer protection for Internet poker is that for most recreational gamblers, the greatest danger to their bankroll comes not from the online casino itself, but rather from other players. Recreational gamblers are typically informed of and should be able to afford the casino's rake. However, it is more difficult for

³⁶ By Gilbert M. Gaul, Cheating Scandals Raise New Questions about Honesty, Security of Internet Gambling, Washington Post, November 30, 2008, available at <http://www.washingtonpost.com/wp-dyn/content/article/2008/11/29/AR2008112901679.html>

³⁷ Id.

³⁸ Id.

recreational gamblers to discover when they are playing against a much better player, and one determined to induce high losses in the recreational gambler. A player might think he or she has just had a run off bad cards, when in fact the player's losses are due more to the superiority of the opponent. In the world of Internet poker, the game is the sharks versus the fish. The sharks are professional gamblers with the skill and tools, some ethical and some not, to catch the bankroll of the fish, amateur players without the skills to defend themselves from professionals.

Obviously, as any fan of old westerns can attest, card sharks have been with us for ages, probably for as long as cards have been used for gambling. However, the Internet presents special difficulties for average players compared to playing cards in person. First of all, in poker games at casinos, a gambler can eyeball his or her opponents and attempt in that way to discern if one of the opponents is a professional. In Internet poker sites, such visual clues are missing. Internet poker games also move more rapidly, so it is easy for players to get more caught up in the game and lose more rapidly than they might in a casino.

More importantly, the Internet and computerized poker have given professional poker players huge additional advantages over recreational players, other than the mere difference in skill. The advent of cheap computer processing has provided professional poker players with access to databases containing millions of hands of

poker, and they can learn to use advanced statistical analysis to tease out new theories of poker playing. In this way, young “math brats” are having surprising success against the previously dominant players in poker tournaments by using probability theory and “a mountain of sortable data from the millions of hands played online to dominate the game.”³⁹ A new guide to poker playing discusses not only game theory and statistical analysis, but also more esoteric tools like the Nash equilibrium.⁴⁰ Players have access to probability calculators that can calculate the probabilities of each hand prevailing far faster and more accurately than a human.

Another tool used by the new breed of online professional poker players is data-mining, which allows players to use the Internet to obtain and track crucial information on other players’ strengths and weaknesses and which is particularly effective in allowing professional players to ferret out weaker opponents for profit. According to a recent report, “There are numerous tracking systems available. . . . Players using such systems are given a heads-up display on their screen that provides invaluable information about other players at the table. This includes such data as VPIP, PFR and AF statistics. For the uninitiated, these acronyms stand for Voluntarily Put Money in Pot, Pre-Flop Raise and Aggression Factor. These are shown as numbers, so for example a player with a high VPIP factor but a low AF will be flagged up as a potential victim.”⁴¹ While the recreational player may have little

³⁹ Dan Kadlec, World Series of Poker: Attack of the Math Brats, Time Magazine, June 28, 2010, available at: <http://www.time.com/time/magazine/article/0,9171,1997467,00.html>.

⁴⁰ Philip Newall, *The Intelligent Poker Player* (2011).

⁴¹ Nic Szeremeta, One issue which divides the online poker community is the use of tracking software, *Independent (United Kingdom)* 54, May 20, 2011, 2011 WLNR 10043254.

idea that he or she has been targeted as a weak player, the professional player may have used data mining to hunt down the weak player. As one gaming author sagely noted regarding on-line poker, “Routinely playing in soft games will do wonders for your long-term profit.”⁴²

Online poker sites have recognized the hazards of such data-mining to their own profit margins and the happiness of many of their clients, and some are beginning to take steps to prevent it, either by introducing their own software designed to prevent data-mining, by changing the information provided by their web-site to make data-mining more difficult, or by offering anonymous tables that prevent the tracking of players.⁴³ However, the data-miners no doubt are taking action to defeat the poker sites’ attempts to prevent data-mining, and it is not clear who will ultimately have the upper hand.

Even worse than data mining are the computer programs, known as “poker bots,” designed to outplay the average recreational gambler and unleashed on the Internet to play against unwitting humans. Poker bots are freely available, and can be purchased on Ebay or other Internet sites.⁴⁴ While poker sites claim to weed out poker bots,

⁴² Anthony Holden, *Holden on Hold’Em*, 143 (2008). Holden also discusses the use of data-mining devices to track the obtain extensive records regarding opponents’ previous games in order to “exploit their style” and also to find tournaments filled with weaker players. *Id.* At 146.

⁴³ Nic Szeremeta, *One issue which divides the online poker community is the use of tracking software*, *Independent (United Kingdom)* 54, May 20, 2011, 2011 WLNR 10043254. See also, *Euclid Infotech: Procurement News, Anonymous Poker Tables Launch at Online Poker Sites*, October 27, 2010; and *AP Alert – HiTech, Bodog's Online Casino Revolution Underway with new Lobby*, August 11, 2011.

⁴⁴ David O. Stewart, *Online Gambling Five Years After UIGEA*, *American Gaming Association White Paper*, 2011, at p. 12.

with the rapid increases in computer-driven artificial intelligence, it may be increasingly difficult for Internet poker sites to bar poker bots from their tables. For example, a recent “white paper” on Internet gambling, claimed that online casinos could detect “bots” by their behavior, stating, “Poker bots tend to play in identifiable patterns and not to show the variability that human poker players demonstrate — bluffing, for example, or taking breaks for food or personal hygiene. . . [M]any bots will click on the same location on the screen for play after play, something that humans cannot do and which is readily detected by audit software.”⁴⁵ These would seem to be flaws easy to correct, especially now that they have been publicly identified.

The playing ability of poker playing computer software is growing by leaps and bounds. In 2008, Polaris, a poker program designed by the University of Alberta’s Computer Poker Research Group (CPRG), played poker against six different professional poker players, and of the six matches, Polaris won three and drew one.⁴⁶ CPRG has improved its poker programs since then.⁴⁷ Many Artificial Intelligence researchers have taken on poker as the next great challenge, now that computer programs have defeated humans in checkers, backgammon, and chess. According to the web page for the Association for the Advancement of Artificial Intelligence’s Annual Computer Poker Competition, “Just as the development of world-class chess-

⁴⁵ David O. Stewart, Online Gambling Five Years After UIGEA, American Gaming Association White Paper, 2011, at p. 13.

⁴⁶ The Economist, Bet on the bot: Will Polaris do for poker what Deep Blue did for chess? July 8, 2010, available at:

⁴⁷ Philip Newall, The Intelligent Poker Player, 222 (2011).

playing programs was considered an important milestone in the development of intelligent computing, poker is increasingly being seen in the same way.”⁴⁸ The 2009 computer poker competition included 25 different programs from 7 different countries.⁴⁹ With this kind of wide-spread international effort, further developments in poker “bots” are likely to come in leaps and bounds, and just as it is now inexpensive to purchase a chess program that can defeat most human players, it may all too soon be easy to purchase a poker “bot” that can vanquish most human competition. Unless regulated, Internet poker may become a shark tank of computer programs, hazardous water for recreational gamblers, who may find their bankrolls regularly taken by computer programs designed outplay them.

The irony in Internet poker is that not only would recreational gamblers benefit from consumer protection that would give them protection from data-mining and poker bots, so too would the poker sites themselves and the governmental entities that can tax the poker sites. With slot machines, the casinos are the sharks with their almost inexorable edge, and all of the players are fish who have little hope of winning in the long run. And so, casinos have little reason to allow slot players to make fully informed decisions.

In Internet poker, however, the game provider has an economic interest in giving fish any information needed to protect themselves from the sharks. Poker sites can be

⁴⁸ <http://www.aaai.org/Conferences/AAAI/2010/aaai10poker.php>

⁴⁹ Id.

viewed as financial ecosystems, with most of the money brought into the system by recreational gamblers, who often are willing to lose money in order to obtain the recreational value of gambling, much like slot players continue to play knowing that the odds of winning in the long run are stacked high against them. Professional poker players bring in an initial stake, but only succeed professionally if they are a net financial drain on the system, systematically removing money from the poker sites. The poker site itself and the government also remove money from the system, through the rake and the tax on the rake. In other words, poker sites and their government beneficiaries are in competition with professional poker players for the money recreational players bring into the system. If there are too many professional players or poker “bots” draining money from the system, recreational gamblers will be tapped out too quickly, or might even flee poker sites after being burned too often, and so leave less profit for the poker site and the governmental entity.

Short of fighting a perpetual and possibly losing battle against bots and data mining, what can government regulators do to provide protection from professional players, data mining and robots? One possibility that government regulators could investigate would be requiring Internet poker sites themselves to track and list ratings for Internet poker players, much like the ratings used in the chess world. In chess, a player’s rating is determined by a player’s win and loss record and the strength of the competition, so that a win against a higher rated opponent provides a bigger rating

boost than against an equally rated opponent.⁵⁰ To convert this system to online poker, it would be necessary to factor into the ratings how much money was at stake in the game, so that big wins or losses would count more, and so that players could not intentionally reduce their ratings by trying to lose numerous very low stakes games. Therefore, a players' rating would increase if he or she won money, and the amount of increase would depend on the amount won compared to the amount wagered, as well as the rating of the player compared to that of his or her opponent.

By providing the ratings of each player at the site, poker sites would alert recreational gamblers when they are facing a player with a much higher rating, and so one likely to win against them, whether that opponent is a poker "bot," a data mining professional, or simply a much better poker player. Some recreational players would welcome such a challenge, while others might run from it. However, the decision would be the players'. Online casinos could also run some ratings-free rooms, where players could go in order to play without their ratings automatically revealed to other players. This would reduce privacy concerns for this system, as those who desire privacy could find it in the anonymous rooms.

If recreational gamblers could avoid much more talented gamblers, professional players and poker "bots," and succeed in playing against other gamblers with roughly equal ability, then they would be more likely able to play longer on the same bankroll.

⁵⁰ Bobby Ang, CHESSPIECE, 9/14/09 BusinessWorld (Manila), September 14, 2009, 2009 WLNR 17989686.

By the same token, if professional players have greater difficulty in finding inexperienced players to target, their winnings will be reduced and they will remove less money from the system. Longer play by recreational gamblers, along with less cash out to professional players should translate into higher profits for site operators and the governmental entities that tax them.

Clearly, this is merely one possible regulatory response to the problem of recreational gamblers facing poker “bots” or professionals playing with computer-assistance or data mining tools. Before such a response is broadly implemented, it should be tested and studied, much like Nova Scotia is currently testing its smart card technologies for use in casino games. The important point, though, is for gambling regulators to think deeply about consumer protection, and test and then implement methods designed to encourage informed decision-making by consumers in the gambling industry.

Conclusion

If Internet gambling is legalized, that legalization should go hand in hand with consumer protection for Internet gamblers. For Internet slot machines, such protections would focus on giving the gamblers the information they need on a timely basis to shop for gambling opportunities and to force Internet casinos to compete based on the price of their slot machines. In addition, further research should be conducted into the possibilities of using smart cards to give gamblers more control over their expenditures.

Designing consumer protection for Internet gambling is a more challenging project.

One possibility would be to mandate that for all but anonymous tables, gamblers have a designated rating which indicates the relative strength or weakness of the player. In that way, recreational gamblers could avoid, if they want, playing against a much stronger player. However, consumer protection for internet poker is a complex problem that deserves more study.