

## Meet Your New Neighbor

**How slot machines are secretly designed to seduce and destroy you, and how the government is in on it.**

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A couple of weeks ago, I went to Harrisburg to take a tour of the Pennsylvania Gaming Control Board's brand-new, state-of-the-art gaming laboratory.

The opening of the facility last September marked a significant milestone in Pennsylvania's quest to become a major gambling state. Only three other jurisdictions in the U.S. have opened their own slot machine testing labs; in becoming the fourth, Pennsylvania was effectively putting itself on the map as being on the cutting edge of state-regulated gambling.

Nestled amid the gaming board offices above Harrisburg's Strawberry Square, with a view facing the state capitol, the testing facility is essentially a large tile room filled with aisles of slot machines. It looks like an extremely unglamorous casino.

Every game that reaches a casino floor in Pennsylvania must first go through this lab — and director of gaming laboratory operations Michael Cruz. With his staff, Cruz uses spreadsheets to verify a game's "payout" — the percentage, on average, the machine returns per bet. It's not quantum physics, but the math requires expertise.

"That's why they established the lab," Cruz said confidently. "So that you, who does not have a math degree, can be sure you have a fair game."

To keep things on the up and up, every first Tuesday, the casinos are required to send Cruz what he calls "the slot master list," detailing the odds of every game operating on the floor of every casino in the state.

It occurred to me that such a list might be of no small interest to people playing those machines.

"Obviously, the payback percentages are proprietary — that's part of the marketing," Cruz said, as if reading my mind. "If we were standing at a machine at Harrah's, I couldn't tell you what the payout is. I know — but I couldn't tell you."

I asked if maybe those odds *should* be posted.

"No," said Cruz. "It's not really part of the industry to disclose the odds ... and it's not required by law, either."

But the gaming board, I pointed out, makes the laws.

"The thing is," Cruz answered, "I don't see what benefit that would be to the consumer. Just because this one has 90 percent payout and this one is 95 percent, it doesn't guarantee that when I put in \$100 I'll get 90 out of this one and 95 out of that one."

Wait ... huh?

For a math guy, this point seemed surprisingly non-mathematical. Sure, there were no guarantees on any one spin, but on average, you'd certainly win more money — or at least lose less — on a machine with better odds. The benefit of knowing the payout, I thought, was pretty obvious.

I pressed Cruz on this.

"That's true," he finally conceded. "But it kind of takes the fun out of it."

Pennsylvania became a major gambling state literally overnight. Act 71, the law which legalized slot casinos here, was passed in the middle of the night on July 4, 2004, without public input, public hearings or — it is increasingly clear — any meaningful research by the state.

Not that there isn't any out there. Pennsylvania's decision flew in the face of, among other things, the recommendations of the National Gambling Impact Study Commission, which reported on gambling to Congress in 1999, concluding that the problems gambling caused were so serious that they warranted a nationwide moratorium.

Pennsylvania legislators, though, apparently felt they could overcome these challenges. To that end, Act 71 created the Pennsylvania Gaming Control Board (PGCB) — a kind of mini-government, really, but funded entirely by gaming revenues — charged with two missions: To "protect the interest of the public by ensuring the integrity of legalized gaming," and to "[fulfill] the objectives of limited gaming in the Commonwealth to deliver a significant source of revenue."

But there is substantial evidence that those two missions — protecting the public and facilitating legalized gaming — are inherently at odds.

At the crux of this conflict is the very gambling institution the state has billed as least harmful: slots.

Also known as "convenience casinos," slots-only (or slots-mostly) gambling parlors located in highly populated areas are precisely the model that Foxwoods and SugarHouse casinos hope to replicate here in Philadelphia. If they do, we will be the largest city in the United States to host them.

In pushing for casinos, Gov. Ed Rendell and others have portrayed slots as a safe medium, a cautious stepping stone to a possible future expansion of gambling to table games, as if roulette or craps posed the greater threat to the safety and sanctity of public life in Pennsylvania.

The opposite is true.

Slot machine gambling — which constitutes about 70 percent to 80 percent of all casino revenue — is, according to abundant and easily accessible research, the most addictive form of legalized gambling out there. It doesn't just attract addicts, some scholars suggest; it creates them.

This means the PGCB has a problem. While it's charged with protecting gamblers — regulating slot machines — it's also supposed to promote the things that do the most harm, by bringing games to the floor quickly and efficiently. Indeed, the board's existence depends on collecting adequate revenue from slot machines.

To some extent, then, the board has to take a side: Either focus on the profit or the public. The closer you examine what the PGCB does, the more "regulation" looks like facilitation.

The first proper slot machine — oddly enough, called the Liberty Bell — was devised in the late 19th century in California (it was banned there three years later). The machine was simple: It had three reels, with five symbols on each. Calculating the odds of winning any given hand might have been a project for a sixth-grader.

Today's slot machine is considerably more sophisticated. And despite the many regulations imposed upon it, can be surprisingly deceptive.

Since the advent of video games in the '70s, slot machines rely not on a mechanical lever and spinning reels but on a computer chip that contains a "virtual reel" — essentially a table of numbers representing the reel you're actually playing on.

What that means is that not only are the odds a mystery to the player, but the reel you're actually playing on is invisible.

The PGCB regulates the odds on these machines; Act 71 mandates that no machine have a payout of less than 85 percent or more than 99.99 percent. But within those boundaries is plenty of room for trickery.

By tweaking the virtual reel, a slot machine programmer can manipulate the outcome that players *see*, leading the players to believe that they've come closer to winning than they actually have. Think of a "near miss," in which it appears you almost hit a jackpot — two 7s and a cherry, say, with a 7 lingering just above the cherry. That cherry was *not* almost a 7.

This innovation might not be so surprising if it weren't for the fact that the gambling industry and the PGCB vigorously deny that near-misses exist. They cite an obscure regulation (included in PGCB standards) that bans machines from making "secondary decisions" — changing the outcome of a play after it's been called by the computer.

But according to Kevin Harrigan, professor of computer science at the University of Waterloo, the "secondary decision" rule refers to a now-extinct method of producing near-misses that has since been replaced by more elegant means: Programmers simply load more near-miss scenarios into the virtual reel, so that they come up more often.

"They just don't call the way they do it 'near-misses,'" he explains.

Of course, focusing on tricks like this presupposes that most players care about their odds, or even keep track of their winnings and losses.

Natasha Schüll, assistant professor in the Science, Technology and Society program at M.I.T., says the ways slot machines manipulate players can be far subtler.

"I agree that in the beginning you can get duped by the illusion, by the near-miss," says Schüll. "But what I know from my years of research is that with gambling addicts, it's counter-intuitively

not about winning. In fact, winning interrupts them. They'll say, 'Oh shit, now I have to sit here for another eight hours to lose this.'"

Schüll has studied the culture and workings of slot machines, slot players and casinos since she first went to Vegas as an undergrad. She's the author of a soon-to-be-released book, *Machine Zone: Technology and Compulsion in Las Vegas*, as well as a documentary.

Much of Schüll's work concentrates on the shocking efficiency with which slot machines not only relieve players of their money, but are able to induce them into a state she calls "the zone."

In the zone, the goal is not to win money, but simply to keep playing, as intensely as possible. Players describe the state as a kind of trance, in which the world melts away and they are alone with the machine.

In one academic paper, Schüll quotes a gambler named "Isabella" describing the experience: "I was gone," Isabella says. "My body was there, outside the machine, but at the same time I was inside the machine, inside the game."

To see what Isabella was talking about for myself, I went to Chester to visit the new Harrah's casino, which opened in January 2007. It's located cheek-to-jowl with the state prison, one of Chester's few other viable industries.

The slot parlor is located on the fourth floor of the massive building, but you hear the slots before you get there, and the closer you get, the louder they become. Karen Finlay, professor at the University of Guelph, has studied the effects of casino design — lighting, layout, machine flashes — on players. She found that music disrupts gambling. "It restores, if you will, the soul — restores your cognitive state to where you can make rational decisions," she says.

The slot parlor of Harrah's Chester does not have music. Instead, there is only The Sound. The Sound is incredible. It is at once many noises, the whirring of a thousand machines at once, and yet also one single note, high and dreamy. That note never stops playing, but within 15 minutes, I couldn't hear it anymore.

As I walked past the glowing machines, I saw a strange sight: A man, maybe in his 60s, had gotten off his stool and was standing between two machines in a kind of half-squat, his arms banging the buttons on either side like two flippers. As the reels spun, he stared between the machines, at nothing.

The night before, I had gotten a call from Les Bernal, executive director of Stop Predatory Gambling, which he runs out of his kitchen. I told him I'd be going to Harrah's Chester the following day.

"Tell me this," he said. "The gambling industry talks about slot machines as being entertainment, as being fun. Tell me if anybody you see looks like they're having fun."

He was right. There were a few exceptions — a couple talking while they played, for example — but most of the players in that vast room sat alone at their machines, smoking and tapping buttons, their faces blank.

"These things are fucking rigged," said one man, without looking up, when I tried to talk to him. "The people who build these things ought to be in fucking jail."

Why, then, was he playing?

"Because I'm fucking addicted, that's why."

The effect slot machines have on players like this, says Schüll, isn't some kind of byproduct. It's the whole point.

Over the years, slot machines have been adapted to encourage players to play faster, longer and for larger wagers than ever.

The stools on which players sit, for example, have been ergonomically designed to avoid cutting off circulation to the legs of players who sit for hours on end. Levers, which take time to pull, have been replaced with buttons — an innovation one gaming expert declared could increase play from 300 "hands" an hour to up to 600 (Schüll estimates that "experienced" gamblers play closer to 900 games an hour). Encouraging sounds, bonus rounds and machines that adjust to the speed at which a player is hitting the button all work together to help ease the player into "the zone."

All of this is designed to increase what industry insiders call "time on machine," one of the many esoteric terms used in the calculus of gambling profit, along with "playing to extinction" — playing, that is, until one has no money left to bet.

"I don't think the industry is sitting around saying, 'How do we addict people?'" says Schüll. "It just has to do with the bottom line. They're going to do everything in their power to get people to play longer, faster and more intensively. ... That's their ideal customer, and that customer, it seems to me, overlaps uncomfortably with someone we call an addict. If we all did what the industry wants us to, we'd all be called addicts."

"People talk about problem gamblers," she adds. "But what about problem machines?"

The 30-odd pages of PGCB rules contain no speed limits for slot machines, nothing to stop a player from betting 900 times an hour. They don't limit the number of lines a player can bet on at once, the amount he can wager per bet — or, for that matter, per visit. They don't regulate how long a player can remain at a machine, or prevent a player from playing on more than one at once. There is no rule requiring slot machines to monitor player activity for signs of problem gambling.

The rules *do* regulate the machines' security features, ensuring that they are tamper-proof and visible — every single one — to security cameras at all times. They ensure that each machine

maintains flawless communication with the central network, that it reports accurately the software that it is running and, to the penny, the amount of revenue it is pulling in.



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When it comes to protecting players from addiction, the PGCB seems to adopt a laissez-faire philosophy. When it comes to protecting revenue, the board gets more involved — downright creative, in fact.

Back at the lab, Cruz described to me the advantages of the state's cutting-edge centralized slot network: "You get instantaneous accounting info," he said. "In Pa., as soon as the player pushes 'bet,' the system knows how much taxes it should take."

He also discussed the "prioritization" program he's helped develop to facilitate communication between casinos and game manufacturers.

"Other labs will just take whatever the manufacturer gives them, whether it's going on the floor or not," he explained. "But I'm talking to Harrah's, I talk to salespeople, compliance people. ... What it allows us to do is only approve games that casinos want. When there's a hot new game coming out, we get it before anybody else."

If the PGCB is so willing to get involved in certain aspects of the casino business, why won't it do more to make slot machines — and the slot environment — less potentially addictive?

On the eve of his re-election to a second term as governor, in a now-infamous interview, Ed Rendell shared with the *Lancaster New Era* his case for casinos:

"For every one person who falls addicted to gambling or loses their paycheck, I'll show you 500 — mostly seniors — who spent \$40 at a casino and had the best day of their month."

In promoting gambling, defending it, or even trying to establish programs to treat addiction, the state has consistently portrayed problem gamblers as a tiny, slightly troublesome minority. It's not clear whether this is willful ignorance or just ignorance on the part of the state. But in either case, it's backward.

It's true that most statistics suggest that problem gamblers make up somewhere between 1 percent and 4 percent of the population (still about 15 times Rendell's figure). But ask what portion of the *gambling* population has a problem, and the picture changes drastically. Several prominent studies — ones not funded by the gambling industry — indicate that problem and pathological gambling make up as much as half of all casino revenue — and as much as 80 percent of that, on average, comes from slot machines.

Problem and pathological gamblers, in other words, aren't just an unpleasant side effect of the gambling industry. They *are* the gambling industry.

The PGCB does, of course, acknowledge problem gambling — in fact, it makes a point of talking about it. In 2005, the board established its Office of Compulsive and Problem Gambling, headed by Nanette Horner. Casinos are required to train their staffs to intervene if they spot problem gambling — although when you see a man squatted between two machines, whacking two buttons as fast as he can, you wonder what other indications of problem gambling the staff might be looking for.

Casinos are also required to maintain a self-exclusion list, which means a gambler can request to have him or herself banned from the casino under penalty of arrest. Signing up takes about a half-hour; an applicant must appear in person, with photo ID, have his photo taken and submit to an interview. Nonetheless, as of last week, 503 people had signed up.

Board officials emphasize that these measures are not substitutes for treatment. But very little treatment is currently available. There are no gambling-specific providers in the state, according to Robin Rothermel, director of Pennsylvania's Bureau of Drug and Alcohol Programs, although the Department of Health contracts with about 35 providers certified to treat gambling addiction. And while the PGCB is indeed required by law to turn some of its revenue over to gambling treatment, the amount is a pittance: the Pennsylvania Department of Health receives only \$1.5 million — or 0.1 percent, whichever is greater — of all casino revenues. (The state, by contrast, receives about 55 percent.)

"It's an awfully small amount of money," concedes Rothermel.

When all these inadequacies are considered together, the PGCB begins to seem less like an attempt to mitigate problems, and more like a publicity stunt — a governmental stamp of approval to legitimize gambling in the eyes of the public.

Casino Free Philadelphia, the local anti-casino group, began as an alliance of community activists seeking to prevent casinos from coming into individual neighborhoods. But increasingly, it's been focusing its attention on the nature of slot gambling — which it calls "predatory."

"The more one learns about it, the more one is opposed to having this predatory industry in anybody's community," says Paul Boni, a local attorney who sits on the group's board.

Recently, Casino Free launched a new campaign.



"Our goal," says Jethro Heiko, a founding member, "is to identify one politician who's anti-casino."

The state and the PGCB, Casino Free believes, have made clear that they're not going to look out for Philadelphians' interests — "I have no confidence in the PGCB ever playing an actual regulatory role," says Heiko. That's why, they say, local politicians need to step up.

Virtually no Philadelphia politician has said he or she *wants* casinos. But none seem willing to do much to prevent them, either.

"We still have a lot of politicians who don't have a position, yes or no, as to whether a casino should be in Philadelphia, and I'm glad," says Heiko. "I'm glad that they're not pro-casino, and I believe that if they, like us, spend time looking at the machines, the facilities and the marketing, they'll come to the same conclusion."

The research certainly suggests that. Baylor University distinguished professor of economics Earl Grinols, one of the foremost experts in the country on the social costs of gambling, has conducted several studies which indicate that the social costs of importing gambling to a community are enormous. Tallying up factors like higher crime, bankruptcy, foreclosure and suicide rates, Grinols estimates that allowing gambling costs a community about \$219 per capita. That's a lot of libraries.

The Nutter administration, which vowed last March to conduct an economic impact study of its own, has yet to begin assessing the potential costs of gambling — even though City Council and the mayor have been approving zoning for casinos.

Terry Gillen, who advises the mayor on issues pertaining to gambling, says a firm has been selected to do the study, but she doesn't know when it will be complete.

"We're not going to sit and defend gaming as the great solution to our problems," Gillen adds. "We are trying to make the best out of a situation that the state of Pennsylvania mandated."

But for Casino Free, this non-opposition is getting tiring. Just as the PGCB's failure to crack down on slot machines empowers casinos, the group feels that city officials' lethargy in opposing casinos translates to support.

"Part of our campaign is to hold accountable our elected officials, and say you can't have this position of not being opposed," says Boni. "You're either pro-casino or not. If you're passing laws, approving zoning, you're in the game. If you're not anti-casino, then you're pro-casino."

Considering that Casino Free has sued the state, gone to jail rather than be kicked out of PGCB hearings, and drummed up considerable public support for its cause (to the point that Foxwoods is willing to move off its original site on the waterfront to the Gallery in Chinatown), its goal of finding an anti-casino politician in Philadelphia seems pretty modest.

But so far, they haven't found a single one.