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Chine of the second and the second a lottery terminals" in Canada, "pokies" in Australia, and "fruit machines" or "jackpot machines" in Britain, they have become the international cash cows of the gambling industry. In the US they generate upwards of three guarters of gambling revenue; even in so-called destination-resort casinos, they bring in twice as much as all other games put together.

> But the machines are noteworthy for more than their extraordinary revenue performance.

> Slots are commonly misperceived as an innocuous form of gambling because they offer relatively low stakes, are easy to play, have historically been popular among women and retirees, and outwardly resemble youth arcade games. In fact, the opposite is true. Studies by a Brown University psychiatrist, Robert Breen, have found that individuals who regularly play modern video slots become addicted three to four times faster (in one year, versus three and a half years) than those who participate in traditional forms of gambling like cards or sports betting. Breen calls these machines "the most virulent strain of gambling in the history of man."

> As I learned from interviews with hundreds of gambling addicts and game designers over nearly two decades of fieldwork on the US gambling industry, the particular addictiveness of modern slot machines has to do with the solitary, rapid, continuous wagering they enable. It is possible to complete a game every three to four seconds, with virtually no delay between one game and the next.

> To my surprise, the vast majority of those I interviewed harbored no illusions of winning big: instead of playing for the jackpot, they played for what some call "the zone" - a trancelike state of absorption that can suspend the pressures and anxieties of everyday life. Some players become so caught up in the interaction with the gambling machine that their awareness of space, time, and monetary value fades.

"The consistency of the experience that's described by my patients is that of numbness or escape," Robert Hunter, clinical director of the Problem Gambling Center in Las Vegas, told me in an interview. "They don't talk about competition or excitement - they talk about climbing into the screen and getting lost."

"Time on device" is the the gambling industry's term for a mode of machine gambling that is less about risk and euphoric thrill than about maintaining a hypnotic flow of action - a mode that is especially profitable for casinos.

"Our best customers are not interested in entertainment," acknowledged a slot machine designer from a company now owned by International Gaming Technology (IGT), the nation's largest slots supplier. "They want to be totally absorbed, get into a rhythm."

So-called problem gamblers are known to contribute a grossly disproportionate percentage of slot machine revenues - 30 to 60 per cent, according to a number of government-commissioned studies in the United States, Canada, and Australia. But problem gamblers aren't the only ones whose finances and well-being are at stake in the bid to expand machine gambling. "Over-spending and/or losing track of time or money occurs for the majority of regular players," a 2011 Canadian report found. While casinos and governments may campaign for "responsible gaming," the evidence suggests that the bulk of their gambling revenues derive from such overspending.

As the psychologist Mark Dickerson explains, the way that modern slot machines configure gambling activity "erodes the player's ability to maintain a sequence of informed and rational choices about purchasing the next game offered."

It's time we asked of the modern gambling machine what is often asked of consumer products like cigarettes, guns, and junk food: Might the product and its design be partly to blame for the problem?

"How can they expect people to gamble responsibly," commented a video poker addict following a Gamblers Anonymous meeting in Las Vegas, "when they build machines that make them behave irresponsibly?"

Surely, civic leaders looking to close budget gaps can find more ethical alternatives than capitalizing on such devices.

It's time we asked of the modern gambling machine what is often asked of consumer products like cigarettes, guns, and junk food: Might the product and its design be partly to blame for the problem?

The American Gaming Association, the lobby group for the US gambling industry, says no: addiction resides in people, not inanimate machines. Yet industry members invest a great deal of their money and energy in the effort to influence consumers' behavior through technology design. At trade conferences, they make no secret of their aims: How to turn casual gamblers into regular gamblers; how to keep them playing longer and spending more; how - to take the title of one panel at the 2005 industry trade show - to "Build a Better Mousetrap".

To this end, over the last decade slot designers have focused on developing low-denomination "dribble-feed" games that take gamblers' money slowly and grant them a steady flow of small wins along the way - just the kind of design that can pull players into the zone that addicts describe. These "high hit frequency, low volatility" games allow players to bet on multiple paylines simultaneously such that they frequently "win" back a portion of their total bet; although they are steadily losing, the audiovisual feedback they receive from the machine is identical to that of winning. Kevin Harrigan and Mark Dixon at the University of Waterloo found that gamblers' brains do not distinguish between actual wins and these "false wins".



tate governments across the United States are scrambling to expand legalized gambling. In the past year, Massachusetts passed a bill allowing three casinos and a slot machine parlor, Ohio opened three new casinos, and Rhode Island, North Carolina, and Maryland all approved new gambling venues. This year promises fever-pitched campaigns to legalize gambling in New Hampshire, Georgia, Kentucky, Texas, and to expand gambling in Florida, Illinois, and Pennsylvania. In New York, Governor Cuomo hopes to establish seven Las-Vegas style casinos on non-Native American land.

Natasha Dow Schilles

Just as they did during the recession of the early 1990s, legislators in cash-strapped states are looking to commercial gambling as a way to raise revenue without raising taxes. Spurred by vigorous lobbying and the pressure of fiscal urgency, they are paying little attention to the potential human costs of partnering with gambling interests.

At a casino industry trade show I attended in 2008, a panelist approvingly told his audience: "States are responding to what other states are doing; there's a lot of border anxiety. It's an arms race."

The most lucrative "arms" at stake in the race to raise revenue from gambling are modern slot machines. The devices – which typically feature video screens instead of mechanical reels, buttons instead of handles, and accept player lovalty cards instead of coins - have become familiar to gamblers around the world. Known as "video

Despite the gambling industry's oft-repeated claim to be the most highly regulated industry there is, the agencies around the world tasked with approving its new slot models perform no tests to determine how technological innovations like false wins might harmfully affect players. There are no consumer protection guidelines in place - in the US or elsewhere - to evaluate the addictiveness of game characteristics such as wagering speed, use of credit rather than coins, and the ability to play for extended periods without interruption. More often than not, regulatory agents describe themselves as working in partnership with industry innovators.

"It's a very symbiotic, help-us-help-you kind of thing," the director of the Pennsylvania Gaming Control Board's gaming lab told a reporter in 2011.

"I don't think serious regulation will ever be part of the conversation here in the States." a veteran designer of gambling machines told me. "The industry is too entrenched, provides too large of a tax base, and the lobby is just too powerful. And if you do create a regulative loophole, guys like us will drive a truck through it."

Legislators in any jurisdiction seeking to expand the availability of gambling machines as a way to bolster government budgets should be wary of inviting financial dependence on devices whose design is widely misunderstood, poorly regulated, and, for millions, addicting.



Natasha Dow Schüll is a cultural anthropologist and an associate professor in the Program in Science, Technology, and Society at the Massachusetts Institute of Technology. She is the author of

Addiction by Design: Machine Gambling in Las Vegas (Princeton University Press, 2012).