Psychologists have long recognized the addictive properties of gambling—it's power to draw people into a cycle of dependence that can empty bank accounts and ruin lives. Games that are a curiosity or occasional recreation for many Americans are for others an irresistible lure that gradually comes to command their lives. In too many cases, the seeding and nurturing of that addiction is no accident, according to Robert Wood Johnson Foundation (RWJF) Health & Society Scholar Natasha Dow Schüll, PhD, MA.

In her new book, *Addiction by Design: Machine Gambling in Las Vegas*, Schüll, a cultural anthropologist and associate professor at the Massachusetts Institute of Technology, describes how the gaming industry has tailored its electronic gambling machines, and indeed everything about the experience of playing them, to lock players into a trance-like, mechanical rhythm that blocks out everything else around them.

The devices are an updated version of the traditional three-reel slot machine, but a gambler of the 1950s would not recognize today's most popular machines. Gone are the pull levers that earned them the nickname, "one-armed bandits," abandoned because they slowed down the pace of play. Instead, today's gamblers interact with the machines by pressing buttons, much as they might on an arcade video game. Also like a video game, the action is often displayed on a video screen, and accompanied by a variety of sounds, flashing lights and messages intended to encourage the gambler to continue playing. By design, each spin or hand is played quickly, with players moving seamlessly, rhythmically, from one game to the next.

The net effect is what Schüll describes as a feedback loop that can completely focus a player's attention. In Schüll's telling, the player stops being driven by fun or excitement about the prospect of winning, and instead enters what gambling addicts call "the zone," in which the objective is merely to continue the steady flow of the game. Here's one gambler's description, from Schüll's book: "I play to keep playing—to stay in that machine zone where nothing else matters." Another gambler told her that even winning can be a "disappointment," because it interrupts the flow of the game.

Not surprisingly, machine gamblers typically play until they run out of time or money, pouring any winnings back into the machine along the way. "You're not playing for money," one gambler told her, "you're playing for credit—credit so you can sit there longer, which is the goal. It's not about winning—it's about continuing to play."
The dynamic is no secret to the industry. "Our best customers are not interested in entertainment—they want to be totally absorbed, get into a rhythm," one game designer told Schüll.

The industry reaps the monetary benefits. The machines account for three-quarters of the casino industry's revenue, with penny slots, the cheapest of the machines, leading the way. At that price, their profitability relies on players gambling quickly and repeatedly.

An Anthropologist's Eye

Schüll became interested in the subject as an anthropology undergraduate some 20 years ago. On a visit to Las Vegas in the early 1990s, she says she was "captivated" by its architecture, its flocks of tourists, and by the ubiquity of slot machines, even at the airport, grocery stores, pharmacies and restaurants. "I'd been to many parts of the world, but Vegas really sparked my curiosity. I thought, what is this place about?! "

"So for a senior thesis," she continued, "I decided to look at casino architecture and interior design and management strategies: How were casinos designed, and how did they try to influence consumer behavior? But as I was writing about these carefully designed and controlled environments, in the back of my mind I was always thinking about the out-of-control gambling behaviors that took place in them, and wondering what kind of relationship there might be between the two."

Still interested in Las Vegas as she pursued her MA and PhD, she began focusing on other aspects of the Las Vegas consumption experience. That led her to produce a documentary film, funded by RWJF during her time as a Health & Society Scholar, on the city's all-you-can-eat-buffets. "I might have done the film on the gambling itself," she says now, "but it was hard to do that," both because the casinos were reluctant to grant that sort of access and because the gambling is "actually incredibly passive and repetitive, with hardly any movement, and people just staring blank-faced. It was not an easy subject for a film." So the documentary focused on a different sort of consumer experience, drawing links between the design and management of buffet dining spaces and the often excessive eating behaviors of patrons.

Moving from the buffet to the electronic gambling machines was a short trip, both in distance and theme. As she explored the machines' design, interviewed the people who played them, sat in on Gamblers Anonymous meetings and more, the addictive dynamic between the machines and the people who played them became clearer to her.

Initially, she says, the "desire to win and to seek out excitement" is the objective of play. "But once you win, you sort of get hooked in, and then play itself becomes the objective. You get more 'value' from the rhythmic flow, the anonymous 'time on the device,' as the industry calls it. And eventually, that's what the gamblers come for, not the thrill of a rare jackpot, but the steady rhythm of playing and occasionally winning.… In that way, machine gambling is quite different than live poker, for example, where you play with other people who give social cues that keep you in the real world. In front of those
machines, the world really drops away…. The money becomes a kind of play currency, and that gets reinforced by the way the machines display credits, not money. You don't even use actual bills or coins these days; it's all converted into credits. So you lose touch with the value of the money."

The Impact on the Gambler

Schüll is careful not to accuse the industry of setting out to create gambling addicts. "Really, like any business, they're maximizing revenue," she says, "making games as profitable as possible. That means getting people to play them for as long as they can. But the result is that they basically treat everyone who sits down at the machine as a potential addict: someone who will play longer, faster, and more."

For the gamblers themselves, particularly those addicted to the experience, the precise intent of the machines' designers is of little consequence. The addictions the machines foster have profound effects on the gamblers when they're out of the "zone" and back in real life. In addition to the way the addiction can empty their bank accounts and dominate their thoughts, "the physiological effects are quite striking," Schüll says. "Women slot machine addicts have a frequent incidence of urinary tract infections, because they're sitting for long periods of time, and unwilling to get up to go to the bathroom…. Machine gamblers are also prone to carpal tunnel syndrome, from pushing the buttons for hours on end. They are typically dehydrated and get dry eyes from staring at the screens for so long."

The industry does not deny that some of its profits come from customers who have grown addicted to their product. But its leaders maintain that the addicts are a small portion of the gambling public and that the effort to protect the select few should not limit everyone else's access to gambling.

Schüll takes a different view, arguing that problematic gambling behavior runs along a continuum. "I think the issue should be reframed as one of consumer protection," she says. She notes that the machines "have a very powerful effect on our psychology—it's not a typical consumer decision like whether to buy that new pair of shoes. It can sweep you away, so you aren't really making free consumer choices when you're in the zone…. Of course, certain people are more predisposed to addiction," she continues. "But addiction is a very human thing. Nearly all of us have had some glimpse into what it's like to be carried away more than we would want to be with some sort of activity. These machines are designed to produce that carried-away behavior, so the conversation shouldn't be just about 'problem gamblers,' but also 'problem machines.'"