Going for broke

Professor says Vegas gambling machines designed to get people to 'play to extinction'

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Natasha Schull recalls how in the late 1990s she began observing people in Las Vegas transfixed for hours at video poker and slot machines. What, she wondered, kept them glued to machines until they lost all they had to lose?

After more than a decade of research that included lengthy observations and interviews focused on gambling machines, Schull is publishing her conclusions on how closely guarded, proprietary mathematical algorithms and immersive, interactive technology are used to keep people gambling until they -- in the industry jargon -- "play to extinction."

Now an assistant professor in MIT's Program in Science, Technology, and Society, Schull believes her research underscores just how addictive today's sophisticated gambling machines have become, something to consider when states are increasingly looking to legalized gambling as a revenue source, often by allowing video poker or slot machines at bars, horse tracks or other locations. Indeed, estimates indicate that a large majority of the revenue from the U.S. gambling

industry -- reported as $92.3 billion in 2007 by the American Gaming Association -- come from such machines.

"I see Las Vegas as a kind of laboratory where experiments are going on between people and machines," says Schull, a cultural anthropologist whose book on gambling, "Machine Zone: Technology Design and Gambling Addiction in Las Vegas," is scheduled to be published by the Princeton University Press in 2010.

In 'the zone'

Key to understanding Schull's conclusions is what she calls "the zone," a dissociative state or trance in which players lose a sense of time, space and physical embodiment, consumed totally by the spinning numbers, symbols or electronic card hands before their eyes. Because gambling machines don't require social interaction (as is the case in table games such as poker), they let people get into and stay in a state that is not dissimilar to, but far more intense than, watching TV; players describe the zone as a compelling, mesmerizing condition of intense concentration -- an almost out-of-body experience. Heavy machine gamblers come to crave this state, says Schull.

There's a "wrong-headed notion" that gambling addicts are motivated by the idea of winning, Schull says. While that may be part of the initial hook, the allure of winning soon fades. The allure of the zone doesn't. "It's about wanting to keep playing," she says. "People will actually get disappointed or irritated if they win a jackpot because it may freeze up the machine and interrupt their flow. Then they have to sit there until they lose it. Walking away with the jackpot is not an option" in their state of mind.

Some players are content to not win for long dry stretches if there's a chance for a big jackpot. But what seems to be compelling to most people and thus most profitable to casinos, is play that produces a constant flurry of little wins, Schull says. Most players will stay on a machine longer if this is happening. One designer told Schull, "Some people want to be bled slowly." To create the kind of game that renders a steady stream of small wins, designers build machines with increasingly complicated playing options, allowing players to bet on more than one line of cards or symbols -- sometimes even diagonally, on zigzag lines, or in "scatter mode," Schull says. Money in a single play can be spread out among dozens of bets, thus almost insuring that something will hit, even if the payback is only a few cents.

These high-intensity gambling machines are played with magnetic-stripe player cards instead of coins, and they no longer feature the pull-handles of traditional one-armed bandits. Instead, they have been upgraded with haptic touch screen technology that creates "a sense of transaction" and helps keep players in the zone, Schull says. Video poker machines, which have been called the "crack cocaine" of gambling machines, further intensify this sense of transaction by adding an element of choice to the game.

And then there's the furniture. "Seats are a whole science unto themselves," she says. Casino chairs are designed with the right tilt to reduce eye fatigue and to avoid cutting off circulation in limbs. Just as factories may seek ways to keep their workers on the assembly line, the aim of

casino gambling technology is to keep people playing faster and longer, but instead of requiring them to bend their bodies and motions to its rhythm, this technology bends itself to the rhythm of the players, Schull says.

Schull says casinos soon will have machines that are the equivalent of a shell in which different games with different payout patterns and symbols can be quickly downloaded from an online server to more closely match the player demographic information that casinos routinely collect. "If you have a certain demographic coming in on Sunday morning that likes a certain kind of game, you'll be able to adjust your game offerings with the press of a button," she says.

To write "Machine Zone," Schull interviewed players and game designers and spent hours observing machine play in casinos, grocery stores and gas stations. She also spent time in an outpatient gambling addiction clinic and interned with an experimental drug trial for video poker addicts. She attended trade shows where game manufacturers freely discussed how to increase what they call "time on device."

Schull emphasizes that the gambling industry's intent is, very simply, to generate revenue: "I don't think that the designers are sitting around, saying, 'Let's addict people,'" she says. She insists she is not anti-gambling. But Schull believes that any community considering slots or video poker should know how the technology works and how it affects human behavior.

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