

Odds are that you imagine gamblers as people simply trying to get lucky and win a big payoff. But when Natasha Schull, an associate professor in MIT's Program in Science, Technology, and Society (STS), began researching the lives of gamblers in Las Vegas, she found a very different motivation at work.

Take, for instance, Mollie, a mother and hotel worker who compulsively played video poker, running through her paychecks in two-day binges, and cashing in her life insurance to get more money to play. "The thing people never understand is that I'm not playing to win," Mollie told Schull. Instead, Mollie's goal was to enter a state of total gambling immersion: "to keep playing — to stay in that machine zone where nothing else matters."

Now, in her new book, *Addiction by Design*, published this month by Princeton University Press, Schull delves into the lives of such gamblers. In particular, she looks at compulsive machine gamblers — not the folks playing social games around a table, such as poker, but those who play alone at electronic slot-machine terminals. For a small percentage of the population, these games become an all-consuming pursuit, a way of shutting out the world and its problems for long, long stretches of time.

But eventually, most compulsive machine gamblers recognize the hold that high-tech gaming has come to have over them. As one gambling addict told Schull: "I could say that for me the machine is a lover, a friend, a date, but really it's none of those things; it's a vacuum cleaner that sucks the life out of me, and sucks me out of life."

Schull thinks this point — that for machine gamblers, it's not about the money, but the escape into the "zone," as Mollie and other gamblers call it — has eluded politicians who wrangle over casino openings and expansions throughout the United States, where more than 30 states currently have some form of legalized machine gambling.

"It's a real stumbling block for policymakers to understand that," Schull says. She adds: "Everyone believes the harm is how much money is spent, and that what's driving the compulsive gamblers is a desire to make money. But ... the 'zone' is really what's driving this experience. The idea of winning money falls away when you get to the point of addiction."

We've all visited the 'zone' — but few people live there

Schull's book is the culmination of a long process of research: She started delving into the subject in the early 1990s, when she wrote an undergraduate thesis at the University of California at Berkeley on the ways casino architecture helped drive customers to gamble more. By the late 1990s, she had moved to Las Vegas to conduct research on compulsive gamblers, talking to a vast number of addicts and industry executives, and even working in a gambling-addiction treatment program.

The phenomenon Schull wound up studying is both one that most of us can relate to — we've all tuned out the world while online, or playing games — and one that gets carried to extremes in gambling addicts.

"This experience of being in the zone is one we've all had, whether it's eBay auctions or sitting on the train compulsively using our phones," says Schull, an anthropologist by training.

On the other hand, "disordered gambling," as the American Psychiatric Association now calls gambling addiction, seems to afflict just 1 to 2 percent of Americans, according to studies.

Yet according to a long string of studies, and as Schull notes in her book, those people can generate 30 to 60 percent of revenues for the machine-gambling business. In *Addiction by Design*, Schull chronicles not only the nature of gambling addiction, but also the ways in which the gaming industry has deployed sophisticated technology to create machines that are extraordinarily compelling for players.

The newest video slot machines, for instance, deliver a frequent stream of small wins rather than infrequent large jackpots. Why? Because after immersion in electronic slot machines, many users resemble one gambler Schull studied at length, who "felt irritated when she won, because it took time for the jackpot to go up, so she had to sit there — and her flow was interrupted," Schull says. "It's the flow of the experience that people are after. Money to them is a means to sit there longer, not an end. They don't win a jackpot and leave, they win a jackpot and sit there until it's gone."

Talking to gamblers themselves, Schull notes, provided “great insight” into the phenomenon of gambling addiction. “There were no real dupes. There was no single person who tried to tell me, ‘I have a system, I have it figured out.’ These were jaded, savvy, aware people. They were not sitting there expecting to win.”

Meanwhile, of gambling industry employees, such as game designers, Schull says, “You’ve got really intelligent guys focused on making technology work, and they don’t think about the larger consequences.” She adds: “Not one of these people is sitting there saying, ‘How can we addict people?’ They are talking about how to increase profits ... [and they] insulate themselves ethically from the outcome as best they can.”

‘People lose track of time and space’

Scholars who have read the book praise its exploration of the psyche of gamblers. Tanya Luhrmann, an anthropologist at Stanford University, lauds the way it “captures the intense relationship between humans and machines that is so much part of what people call the addiction experience.” Luhrmann adds that until reading *Addiction by Design*, she “hadn’t realized gambling was so much about the experience” of playing, rather than winning.

Schull’s research had attracted considerable attention well in advance of the book’s publication: She has appeared on “60 Minutes” and testified about the subject in front of the Massachusetts state legislature.


Yet Schull holds off on offering specific regulatory remedies concerning the way games should be structured. In some countries, legislators have suggested slowing down the pace of electronic slot machines to stretch out payoffs and water down the intensity of the experience — a technological fix Schull calls “wrongheaded” because it may simply encourage gamblers to play for longer periods using an equal amount of money.

Machine gambling, Schull emphasizes, “is not like buying a movie ticket or making a purchase at a store and then going home. This is rapid, fast, continuous spending where people lose track of time and space, and their ability to make decisions shifts over the course of the encounter.”

Instead, Schull asks, "Given the nature of this product and this interface, shouldn't policymakers, state legislatures, be learning a little bit more about how this product affects people?" She adds: "I think my work is part of an emerging conversation."

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Addiction:

Gambling vs. Drug and Alcohol

Similarities

Loss of control
Denial
Similar highs
Depression and mood swings
Chasing
First high (win) remembered
Blackouts/Brownouts
Use as an escape
Preoccupation
Tolerance
Withdrawal
Low self-esteem and high ego
Use of rituals

Differences

Hidden addiction
Can't overdose- no saturation point
Perceptions (social acceptance)
Huge financial problems
Can function at work
Can't be tested
Doesn't require ingestion
Fewer resources available

UNDERSTANDING THE COSTS OF GAMBLING ADDICTION

- 60% of those addicted to gambling will commit crimes¹
- 20 % of gambling addicts commit or attempt suicide²
- 63% of gambling addicts are alcoholic¹
- 20% of addicted gamblers have filed for bankruptcy³
- 50% will abuse spouses and children⁴
- 20% of the homeless are gambling addicts⁵
- 50% of gambling addicts will divorce⁶

¹ California Council on Problem Gambling

² National Council on Problem Gambling

³ Prof. John Warren Kindt Bankruptcy Developments Journal, volume 19, No.1

⁴ National Research Council, The Guardian

⁵ Atlantic City Rescue Mission and Association of Gospel Rescue Missions in Kansas

⁶ National Opinion Research Center survey

Living within 10 miles of a casino can increase the chance of becoming a problem gambler by 90 percent. ~ *Research Institute on Addictions*

The number of problem gamblers doubles when there's a casino within 50 miles. ~ *National Gambling Impact Study Commission*

30 – 50% of gambling revenues derive from problem and pathological gamblers. ~ *Baylor University Professor Earl Grinols*

The average gambling debt is between \$63,000 and \$110,000. ~ *CT Dept. of Mental health*

Each pathological gambler on average costs the insurance industry \$64,468 for fraudulent claims. The annual loss due to fraud by pathological gamblers is estimated to be 1.32 billion. ~ *The WAGER, Harvard Medical School, Division on Addictions April 9, 1996.*

Addicted gamblers cost the United States between \$32.4 billion and 53.8 billion a year. ~ *Baylor University Professor Earl Grinols*

The rate of attempted suicide among compulsive gamblers is 200 times the national average. ~ *Arnie Wexler, the former executive director of the New Jersey Council on Compulsive Gambling and now head of a consulting firm that specializes in compulsive gambling and other addictions, 9/6/99 The Advocate*

"So when you're dealing with one addict, you're dealing with 8-10 other people that get affected because of the addiction." ~ *Ed Looney: the Council for Compulsive Gambling. March 21, 2006 Gambling at an All Time High www.family.org/cforum*

Interesting "Tidbits" that may or may not shock you:

- Gamblers are often trying to recapture the high of the first "big win," not the same as, but similar to, cocaine addicts "chasing" their first high.
- Gambling is extremely difficult to abstain from, most similar to quitting smoking cigarettes.
- For some gamblers, the high is probably most similar to the excitement of speed, cocaine, and sex addiction. For others, it is like a numbing, or escape, similar to the effect of valium, or other relaxing medications.
- Similar to other addictive people, gamblers come from families with a high rate of dysfunction, such as alcoholism, general trauma, domestic violence, and emotional, verbal, and sexual abuse.
- Gamblers are usually more isolated than drug and alcohol addicts. It is an addiction acted out mostly alone. You don't even want anyone else to talk to you while you are in your gambling state. Obviously, other gamblers are competition.
- All addicts, including gamblers, live in a fantasy world, with much denial.
- For gamblers in recovery, withdrawals, cravings, and impulses to gamble tend to be much longer and stronger than similar cravings in alcoholics and drug addicts in recovery.
- It is extremely difficult to avoid triggers with gambling, as compared to drug and alcohol addicts. Pay attention to how many times you see signs, billboards, TV commercials, TV

shows, and radio announcements, advertising gambling. They are all inviting you to win something for nothing.

- Withdrawal is most closely related to a mild heroin withdrawal.
- With all addictions, it usually takes a year before you are really ready to deal with the underlying issues that support your addiction.
- Problem gamblers typically become involved in criminal activity earlier in their lives than alcoholics or drug addicts do (writing bad checks, stealing money, using other people's credit cards, ATM cards, signing up for credit cards in other people's names, embezzling from their jobs, and using checks without consent).
- There is something called Post-Acute Withdrawal (PAW), and it says that you will feel the symptoms of withdrawal off and on for up to two years after ceasing gambling. So, if you are going along well in your recovery, and "out of the blue," you feel depressed or confused, you can't concentrate, are clumsy, irritable, and angry, consider PAW. Acknowledge it, and ride it through until it is gone. Be careful of relapse during this time.

Fast game

Critics say computerized slot machines create a faster and more addictive game experience. Some techniques used to keep gamblers playing:

Larger combinations of bets give more possible jackpots.

Many slots are themed with pictures and music based on popular films or TV.

Touchscreens and tactile feedback

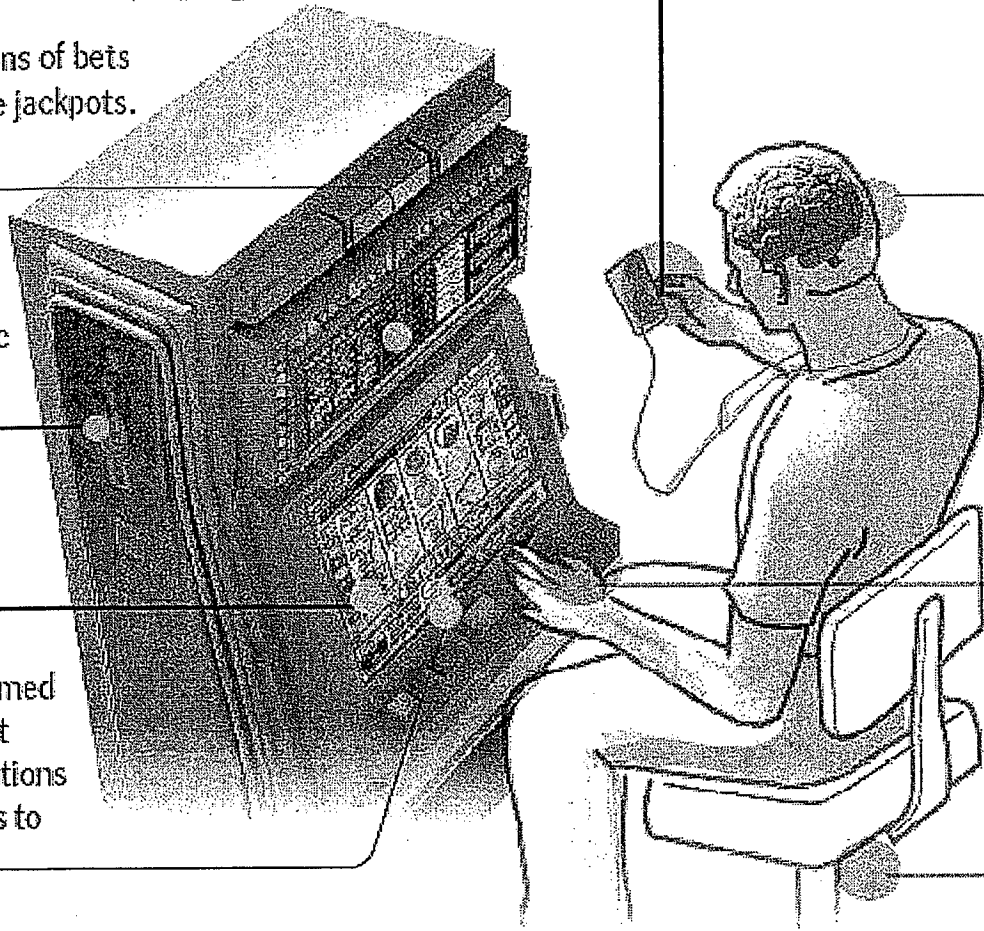
Slots are programmed to display frequent near-win combinations to tempt gamblers to keep playing.

Instead of coins, transactions are done with "ticket-in-ticket-out" or player cards with credit.

In gamblers' brains, anticipation of a possible win releases dopamine, a feel-good chemical involved in drug addiction.

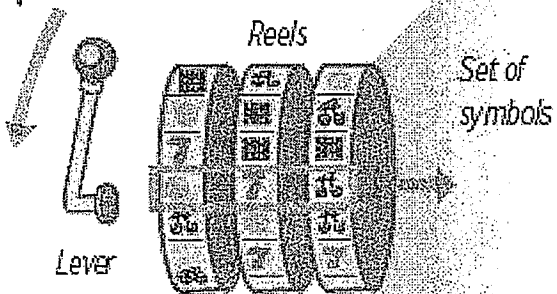
Computerized machines allow faster bets. On average a gambler makes a bet every 5 seconds.

Ergonomic stools allow long game sessions.



MECHANICAL SLOTS

In traditional machines, reels were set into motion by pulling a lever and stopped mechanically at random positions.

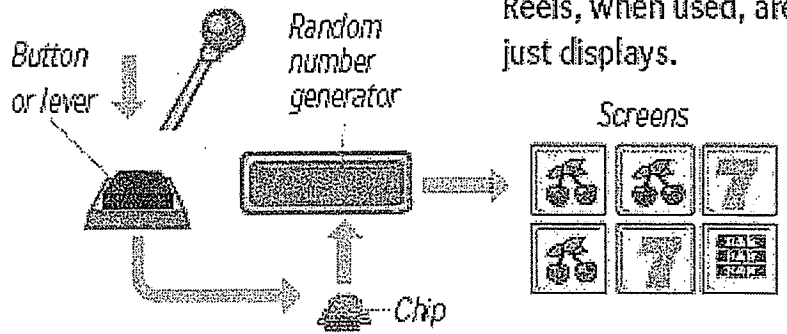


In theory, it was possible to predict the odds of a particular outcome, since each reel had a limited set of symbols (usually 22 or 32).

VIDEO SLOTS

Nowadays, a microprocessor generates a random number at the pull of the lever or the press of a button.

The number determines the result, displayed as figures on screens. Reels, when used, are just displays.



Unlimited numbers make it impossible to predict the outcome of individual bets, but the chip determines the average odds in the long term.

SYMPTOMS LEADING TO CONTINUED GAMBLING BEHAVIOR

While it is up to the individual to maintain the disciplines that insure abstinence from gambling, there are ways in which others can help. Nearly every person close to the gambler is able to recognize changes that indicate a return to the old ways of thinking

One of the biggest problems may be an unwillingness to listen to others. We may consider it nagging, or a violation of privacy. There are many danger signs. If the symptoms are recognized and caught early enough, we can change our attitudes and behaviors and get back "on track". Along with listening to others in our lives who care about us, a weekly inventory of symptoms using a guide like this one may help prevent a return to gambling. Some symptoms are listed below. Look for areas in which you need work, make an action plan, and do it. Remember the **HOW** of recovery: Honesty, Open-mindedness, and Willingness.

Exhaustion: Allowing yourself to become overly tired, run down, or in a general state of poor health as well as failing to eat properly, to exercise, and to rest -- will almost always lead to problems. Healthy thinking and behavior arise from a healthy lifestyle.

Dishonesty: This begins with little "white" lies -- skipping over or leaving out the truth -- and progresses to lying to yourself through denial and rationalization, making excuses, or not doing what you need to do to stay gambling-free.

Impatience: Wanting things to happen quickly on your schedule, rather than being content to "go with the flow and continue to grow." It is being unwilling to take your time, do the little things you need to do and trust everything will turn out as it is supposed to. Some impatience is normal for all of us, especially when times are difficult. It is important to recognize impatience for what it is and to move on.

Depression: Feelings of sadness, helplessness or hopelessness may result in a "what's the use" attitude. Depression should be a signal to talk to someone about what's bothering you. It is a part of the grief process, but prolonged depression may be an indication of something else.

Anger: Often a cover for fear or sadness, anger is the emotion that many gamblers use as an excuse to gamble. When you get upset, take time out to think and plan a healthy use for your "anger energy". Physical exercise, writing a "no send" anger letter, talking to someone, or other creative activities may help defuse the anger. Anger is a natural phase of grieving, but getting stuck in anger is painful and unhealthy.

Victim Stance: Gambling can cause devastating results in our lives. Feeling like a victim is a natural part of early recovery, but *getting stuck* in this state of mind for too long only makes things worse. It's ok to allow yourself to grieve your losses and then plan your comeback!

Over Confidence: This is an "I've got it made" attitude. It says, "I can hang around in places where gambling takes place, or carry money on me and not gamble." Over confidence is dangerous and does not take self-care into account. It also does not take into account those things that are powerful triggers to relapse.

Complacency: This attitude allows us to give up the disciplines of our recovery because we "really don't even think about gambling anymore." The pain of the crash is forgotten, and the person does not

THE FOUR PHASES OF PATHOLOGICAL GAMBLING

Robert Custer, M.D. first identified the four phases in the progression of the pathological gambling disorder. These include: the winning, the losing, the desperation, and the hopelessness phases.

Winning Phase: The individual begins gambling and finds it to be an enjoyable, exciting form of entertainment. Winning brings even greater enjoyment and pleasure to the gambler. The pleasure derived from gambling is in the form of elevated self-esteem occurring with each win and/or the physiological pleasure associated with the excitement of wagering.

It is quite common for pathological gamblers to report a big win early in their gambling histories. The early win seems to spur on further gambling, which eventually leads to increasing losses.

Losing Phase: Losses begin to add up and the gambler begins "chasing" after a win. That is, the gambler spends more and more time gambling in an effort to win back lost money. The gambler bets more heavily and more frequently and often attempts to win back at one time all of the money previously lost. Borrowing from every possible source (friends, family, co-workers, banks, finance companies, bookies) also accelerates. It is during this phase that the gambler is likely to begin to use illegal methods for securing money to gamble with. Forging a spouse's or family member's name on a check or a loan application can occur. Relationships with family members and friends become strained as the gambler spends more and more time and money on gambling as mounting financial difficulties are exposed via unpaid bills, and threatening calls from creditors. Work often becomes a minor priority, with absences increasing as the gamblers spend more and more time gambling or preoccupied with thoughts of gambling during work hours. Such behavior causes significant difficulties with employers. The gambler may, at this point partially confess to family, friends or an employer about his or her "problem with gambling". This may result in a temporary financial "bail out" being provided to the gambler. Unfortunately, the gambler will often use these funds to gamble with rather than pay off the debts owed, inevitably resulting in further losses, further acceleration of gambling, and increasing stress on the gambler.

Desperation Phase: The gambler becomes obsessed with "getting even" and paying off debts. Most waking hours are spent gambling or acquiring the resources with which to gamble. Legitimate sources of funding become virtually non-existent and the gambler increasingly resorts to illegitimate means of obtaining funds: forgery, embezzlement, credit fraud, and bookies. The gambler becomes increasingly panicked over mounting losses and the inability to access resources for gambling. Risk taking and irrational gambling result from this panicked state. By this point, friends and family are usually fully aware of the gambler's problem and exert increasing pressure on the gambler to stop gambling. The gambler becomes restless, irritable and is often unable to sleep or eat properly. Little pleasure is found in life; even winning does not bring much pleasure at this stage. The gambler nears emotional and physical exhaustion.

Hopelessness Phase: Depression, alienation from family and friends, loss of job or business, physical illness, and suicidal thoughts accompany the final phase of the disorder. It is this stage in which the gambler recognizes he or she has very few options for resolving the difficulties that have arisen as a result of gambling, suicide, imprisonment, running away, or seeking help.

A pathological gambler is most likely to seek help either on his or her own accord or as a result of the prodding or insistence of a friend or loved one during the final two stages of the disorder.