## Twitter Thread by Shravan Venkataraman 뜨픈

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## In 2011, a blackjack player made $\$ 20$ million over 4 months, <br> and ended up bringing some of the topmost casinos to their knees.

## Here's the crazy story of how he pulled it off.

Don Johnson grew up taking care of his uncle's racehorses in Salem, Oregon.

After taking interest in them, he began riding them competitively at age 15.

He then became a professional jockey.

As a jockey, he had to stay on a strict routine and take medications to keep his natural weight off and remain slim.

Eventually he couldn't keep up the routine

So, he quit the job, and went to Philadelphia to manage racetracks.

Johnson was hired to manage the Philadelphia Park.

That race track evolved into the Parx Casino, in Bensalem.

Johnson was in charge of day-to-day operations, including the betting operation.

That's where he started learning about gambling.

Between 1990 and 2010, Johnson's career has moved from managing racetracks to being a state regulator in the gambling industry.

Around 2000, he started a business that does computer-assisted wagering on horses.

His company employed software that analyzed more data than an ordinary handicapper will see in a thousand lifetimes.

The software also defined risk to a degree that was impossible at that time.

Before we proceed further into the story, you need to understand the basics of blackjack.

1/ You play against the house.

2/ Two cards are placed face up before the player,
and two more cards, one down, one up, before the dealer.


King, Queen, Jack - these are called face cards.

A card's suit (heart, spade, diamond, club) doesn't matter.

Only its numerical value matters.

Each face card is worth 10.

An ace can be either a one or an 11.

The goal is to get to 21 , or as close to it as possible without going over and above it.

The player has to scan the cards on the table before him.

Then, he can either stand or keep taking cards in an effort to approach 21.

The house's hand has one card facing down.

The player can't know exactly what the hand is.

That's exactly what makes this a game.

The most obvious way that someone can win in blackjack is called "card counting".

Card counters keep a mental tally of every card dealt.

Then they adjust the bet according to the value of the cards that remain in the deck.

Card counting is considered cheating, at least by casinos.

In most states (but not New Jersey), known practitioners are banned.

Usually, card counters and the way they bet have a specific pattern.

The casinos monitor for such pattern to show up and flag/ban such players.

There's a specific way the casino industry works, and usually the odds aren't in your favor as a player.

Casinos are usually after the high rollers who are also known to be average or outright bad players.

These are guys who wager tens or hundreds of thousands per hand.

Such high rollers (also called "whales" by the casinos) are offered free meals and drinks, free stay in luxury suites, free rides on private jets, and more.

Casinos distract them with such cheaper perks so that they don't realise they are losing more than these free perks cost.

Not all the "whales" are the same.

When someone makes all the right moves, it brings down the house advantage.

With such players, the house might win 2-3 hands every 100 hands.

Then there are the players that the casinos call "craps".

These players don't use the perfect strategy, and play randomly.

With these players, there's a big house advantage.

It is these kind of "whales" who all casinos compete to bring in to play.

For casinos, the art is in differentiating between the skilled whales from the unskilled ones.

Then they have to discourage the skilled and seduce the unskilled.

The industry keeps a close watch on high-level players.

Once a player earns a reputation for winning, the casinos stop seducing them.

The last thing a skilled player wants is a big reputation.

Some whales even wear disguises when they play.

The odds in blackjack are easy to calculate.

Many casinos sell laminated charts in their guest shops that reveal the optimal strategy for any situation the game presents.

But these odds are calculated by simulating millions of hands.

A normal player never sees million hands.

What's more useful?

Running a smaller number of hands and paying attention to variation.

The way averages work, the larger the sample, the narrower the range of variation.

For ex:

A session of 600 hands will display wider swings.

It will have steeper winning and losing streaks, than the standard casino charts.

This insight is important when the betting terms and special ground rules for the game are set.

Don Johnson's skill at establishing these terms is what sets him apart from an average casino visitor.

He gained experience regulating the industry.

He also diligently studied the casinos, their house edge, and their games, for years.

He was waiting for the right opportunity.

Johnson is quite good at gambling, especially because he doesn't gamble.

He does not just walk into a casino and start playing, which is what roughly 99 percent of customers do.

He considers that as "blindly throwing away money."

The game is structured in a way that it gives the house a significant advantage.

People do win occasionally.

But the vast majority lose.

The more they play, the more they lose.

It's all in the law of large numbers.

Sophisticated gamblers won't play by the standard rules.

They negotiate.

The casino values high rollers more than the average customer.

So, casinos will usually be willing to lessen their edge for them.

Their primary method of doing this is through loss rebate discounts.

Here's how discounts work:

For example,

Discount offered -> 10\%
Player loses -> \$100,000
Player pays -> \$90,000.

There was a catch:

If the discount offered is for a lifetime \& for loss upto \$500k, you pay $10 \%$ lesser only once you have lost whatever you made previously.

If you visited a casino 4 times, and you made $\$ 4$ million in all those visits combined,
you'll have to lose $\$ 4.5$ million in order for the $10 \%$ discount to kick in.

Typically such loss rebate discounts are also accompanied by a rule that the player has to play a minimum number of hours (say 12 hours).

This requirement brings a theoretical edge to the casino, which can compensate the cost of the rebates/discounts.

Other than just providing the regular perks and discounts, sometimes casinos also stake the player thousands of dollars in free chips up front.

But, despite all this, the player usually still loses, and casino ends with slightly less of the player's money.

Casinos were booming in business in the early 2000s.

But, once recession set in after 2008, their revenues began to slide.

In the Atlantic City, the 11 casinos together made $\$ 5.2$ billion in 2006, but only $\$ 3.3$ billion in 2011.

As things weren't showing signs of turning around, and hard times set in, the casinos started getting desperate.

Their table revenues were going down.

The number of high-rollers willing to spend on games also started going down in number.

The casinos had to do something.

In a desperate move, casinos had their marketers compete ferociously.

Part of such competition meant giving deals to high-rollers (the ones that casinos want to seduce) that were unheard of.

By late 2010, the discounts started edging higher and were around $20 \%$ at one point.

This not only meant that the casinos were taking on more risk.

It also meant that if the casinos were right, they stood to make more return out of that risk.

Don Johnson who was constantly keeping in touch with the casinos, started noticing this desperation.

He wasn't particularly known for winning, and he wasn't blacklisted by any of the casinos.

So, casinos started inviting him with deals that were unheard of in the New Jersey gambling circle until then.

The Borgata casino was the first one to invite Johnson.

He mentioned that he doesn't want a lifetime discount and that it is skewed against him.

As part of the deal, the casino offered him a trip-to-trip discount

When you're offered a trip-to-trip discount, it effectively meant any previous visit's winnings will not have to be lost before discount kicked in.

If you made $\$ 4 \mathrm{~m}$ in the previous 4 trips, you don't have to lose that first before losing more and activating the discount.

When Borgata casino closed the deal with Johnson with a trip-to-trip basis discount, two other casinos - Caesars and the Tropicana also offered similar deals.

These deals effectively brought down the house advantage.

Usually, the casinos use computer models which calculate the odds very accurately.

They use such models to come up with deal terms for high rollers, without giving up the house advantage.

Once a customer comes in, based on how they are playing, the casino's computer models will suggest how much discounts to give to the respective player.

This is highly dependent on the player's skill level.

But the casinos relaxed these to an extent it ended up causing damage.

Johnson worked out the math and negotiated with each casino in such a way that the deal terms ended up putting him in favor significantly.

Some of the terms included:

- Playing with a hand shuffled six deck shoe
- the right to split and double down on upto 4 hands at once

The terms also included a "soft-17" rule.

If the cards you have total 6 plus an "ace" card, the ace can either be a 11 or 1 depending on the card that you draw.

This is to prevent the player from going bust by going above 21 in the total of the cards in his hand.

After the final terms were crafted, Johnson did the math and arrived at the understanding that he will be playing a 50-50 game against the house.

With the $20 \%$ discount he was offered, he was only risking 80 cents with every dollar he staked.

The deal was that he had to start with $\$ 1$ million.

He brought the $\$ 1$ million with the rationale that he'd never lose the entire $\$ 1$ million.

He figured if he lost $\$ 500 k$, he'd kick in the discount of $\$ 100 k$, and pay them only $\$ 400 \mathrm{k}$ and leave.

Given he had a 50-50 odds, if he started out winning and made money in an initial streak of wins, he could just keep going.

That's what happened.

He started wagering \$100,000 in a single hand.

And, from his first hand, he started winning.

He bet \$100,000.

He was dealt two eights.

If a player is dealt two eights, he can choose to play each card as a separate hand.

In effect, this doubled his bet.

When Johnson was dealt two eights, he chose to split.

Lucky he was, the next two cards were eights too, and he chose to split again.

He was now playing 4 hands, each with 8 , and $\$ 400,000$ at stake.

He was dealt a 3 on his first hand, 2 on his second, a 3 again on his third, and 2 again on his fourth.

Johnson had the option to double down his bets.

He doubled down on all 4 hands.

Now his risk was $\$ 800 k$.

When the dealer's turn came, dealer had a card face up with the value 5 .

The card the dealer drew was a 10.

There was a face down card.

If that card was 7 or higher, the dealer's hand would go over 21 , and the dealer would lose.

Johnson chose to call the game.

Johnson's bet was that the dealer's face down card would be 7 or more.

If the dealer got a 6 or less, Johnson would lose $\$ 800 k$.

The dealer opened the face down card.

It was a 10.

In just one hand, he made $\$ 800 \mathrm{k}$ (combination of all four hands he split).

In a sequence of 3 hands thereafter, he made $\$ 1.2$ million.

Johnson kept going.

The pit bosses noticed.

He went on a roll, and won $\$ 5.8$ million that night.

The casino (the Tropicana) pulled the deal and asked him to play with regular terms after the $\$ 5.8$ million mark.

He repeated the same feat in Borgata (got cut off after $\$ 5$ million) and the Caesars (cut off after $\$ 4$ million).

When he insisted he wanted to continue playing, the pit boss showed him the high roller pit, the one without any deals, the regular terms.

Johnson denied, and went back to his hotel suite with his winnings.

Among all the casinos he played, his total winnings came to nearly $\$ 20$ million dollars.

The Tropicana casino eventually fired the CEO after the incident, as he was the one who'd granted the deal terms to Johnson.

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— Shravan Venkataraman \U0001f525\U0001f680\U0001f4b0 (@theBuoyantMan) August 12, 2022

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This story was sourced from stories of the incident written by different writers - Mark Bowden, Eliot Jacobson, Kristina Vujadinovic, David Turner, and Bovegas blog.

