

Gambler's Memory Paradox

– or why playing to win may be better
than playing for fun



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Two fundamental misconceptions



Irresponsible gambling misconception:
Gambling is a good way to win some money.



Responsible gambling misconception:
Players should gamble for fun, not to win money.

... and the second misconception is probably the bigger one!

Gamble for fun?

Why this is a misconception?

- Wagering real money is a necessary component of gambling arousal (Anderson & Brown 1984).
- Technically, the more arousal (fun) one wants, the more he or she has to bet and... lose.
- Triumph of political correctness over common sense?

Gamblers have very well-defined preferences...

The table below shows various basic and complex derived statistics for one player visiting three casinos (real data). The consistency is simply stunning:

Results - Player Z	Casino 1	Casino 2	Casino 3
No. of visits	83	267	231
HOLD %	24%	19%	18%
Visits ending with a win	49%	58%	50%
Visits ending with a tie	-	-	0%
Visits ending with a ruin	22%	21%	20%
Average DROP Visits ending with a win	78.4	61.4	60.3
Average DROP Visits ending with a loss	138.6	124.9	124.9
Correlation: Result - Time to next visit	-0.305	0.103	-0.160
Sessions when DROP is a multiple of PLN 1000	55%	55%	52%

Gamblers have very well-defined preferences...

Contrary to popular beliefs, there are many gamblers who prefer negative skewness (large probability of small win rather than small probability of large win)*

Consumption-oriented gamblers lose more than money-oriented gamblers*



* See my 'Between Consumption and Investment...',
Journal of Gambling Issues, 08/2006.

Gambler's Memory – how gambling sessions reinforce the desire to gamble?

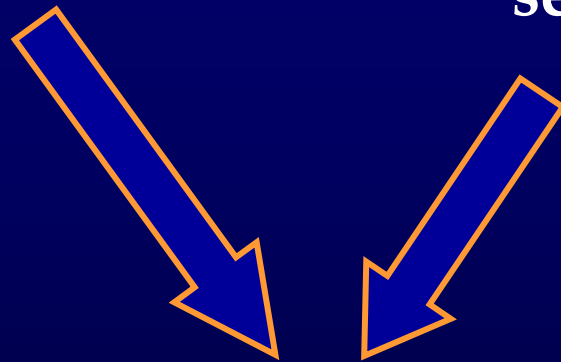


- Data: 30+ most frequent players, 3 small casinos, 24 months.
- No significant positive correlations – some significant negative correlations.
- Psychological rather than economic explanation.

Gambler's memory paradox

No inter-session chasing
– loss is indifferent or
defers next visit.

During the gambling
session, the loss is correlated
with the length of play.



If player wants to have pleasurable
experience he or she should target
small frequent wins.

A false alternative...



player who gambles for fun

vs.

player who dreams for big win, chases losses and so on...

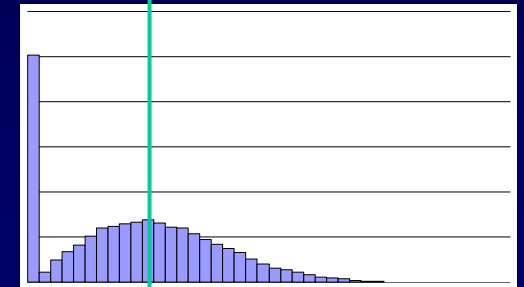
What about:

Player who hopes for a modest win?

Distribution of after-game player's capital

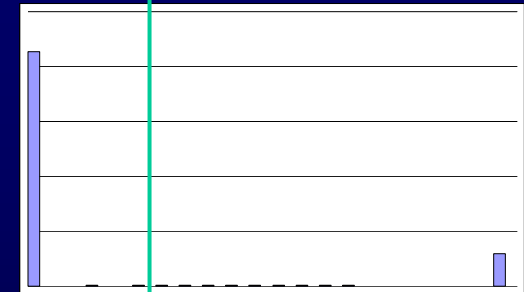
Gambling for fun (pre-determined time)

Ruin-adjusted binomial distribution
moderate or large expected loss



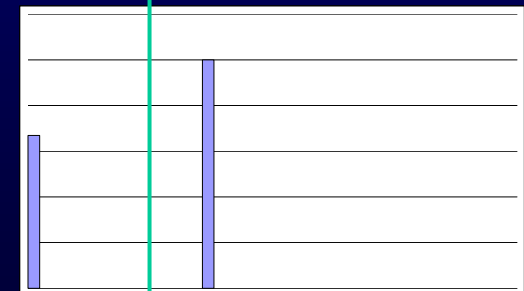
Gambling for big win

Bimodal distribution, many losses, little wins
large expected loss



Gambling for small win

Bimodal distribution, many wins, little losses
small expected loss



The responsible strategy to win a modest amount may be confused with chasing...

few large wins

many small wins

REAL CASINO STATISTICS	Player X		Player Y	
	Casino A	Casino B	Casino A	Casino B
No. of visits	133	237	218	114
Hold PC	15%	16%	37%	30%
Visits ending with a win or tie	75%	80%	29%	30%
Visits ending with a ruin	13%	9%	51%	57%
DROP Variability (std / avr)	1.76	1.67	0.92	1.06
(Avr.DROP Win) / (Avr.DROP Loss)	18%	24%	62%	99%

many re-buy-ins
= self control

large average loss

What constitutes a responsible gambling?

Telling the players that they should gamble for fun is like telling them that money does not matter in gambling.



This is very misleading.

Telling the players that they should gamble for fun and introducing loss limits is an example of inconsistent paternalism.

Solution: a ~~loss~~ win limit...

The maximum WIN limit

- an alternative responsible gambling strategy

- Reduces expected loss by reducing the length of gambling session
- Increases propensity to visit gambling venue by increasing frequency of wins

seems like a real 'free lunch' ☺



Thank you for your attention!

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The empirical data used in this presentation was collected with the invaluable help of two Polish casino operators: Orbis Casino and ZPR SA.