Practice makes poorer: Investigating the role of free-play modes in simulated internet gambling

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Overview of Presentation

- Free play modes and internet gambling
- Purpose of project
- Methodological design of studies
- Principal findings
- Conclusions and other current research

Free Play Modes

- A free play mode allows players to gamble on internet sites without losing any money
- Some sites may offer bonus e-cash or the person gambles for credits
- Concerns that the free play modes offer inflated returns (Sevigny et al., 2005) which could lead to excessive optimism concerning subsequent gambling involving money

Impact on young people

- Free-play modes may encourage young people to gamble
- Playing for points/ credits simulates the type of experience in video-gaming
- Early big wins can have a strong effect on subsequent gambling
- Evidence: Ipsos-Mori survey in the UK (Forrest, McHale and Parke, 2009) found that using free play modes predicts involvement in monetary gambling

Psychological Effects

- Operant Conditioning Theory
- Animal studies show that more reliable sources of reinforcement will be chosen when there is a choice between schedules of reinforcement (see Flora & Pavlik, 1990)
- Cognitive theory
- Exposure to free-modes can yield an illusion of control which is more likely when the probability of an outcome is high when responses are produced: P (O/R).

Aims of study I

- Examine the behavioural and cognitive effects of exposure to different free-play reinforcement experiences
- Simulated internet roulette
- Comparison of standard returns to player (RTF) with inflated/ profit outcomes vs. control
- Persistence
- Risk-taking
- Perceptions of skill and control

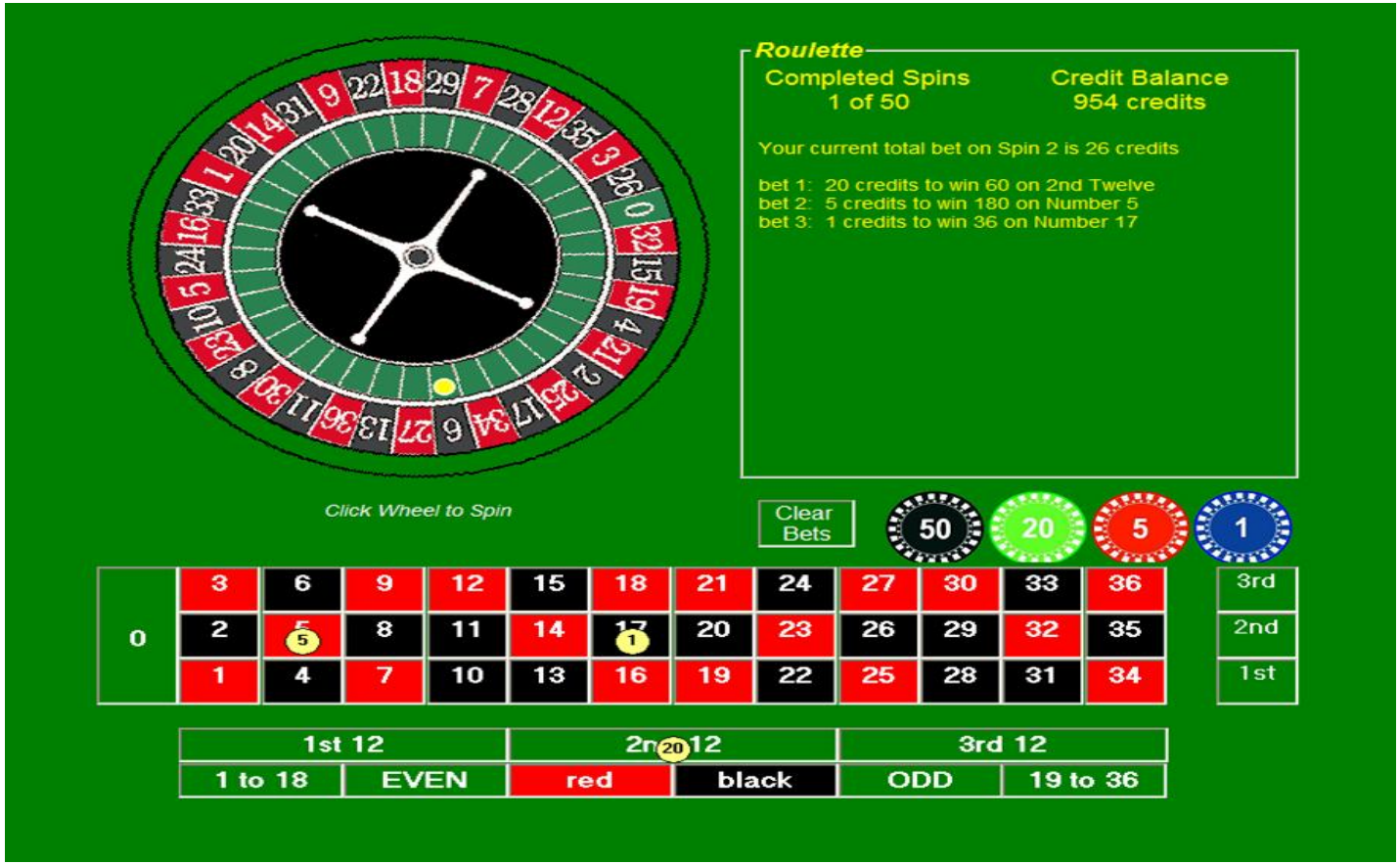
Study Design

	Pre-exposure	Gambling for money
Gp 1:	Break-even	All 4 group then
Gp 2:	Standard (90%)	gambled for money and could stop after 50 trials
Gp 3:	Profit (150%)	
Gp 4:	-	

Sample and Procedure

- 80 participants recruited from the University population and randomly allocated to the 4 conditions
- Completed PGSI, Drake Beliefs about Chance and demographics, gambling questions
- Completed the free-play mode
- Real-play mode (50 trials) and they could stop at any time
- Given $10 = 1000 credits and could keep any winnings

Roulette simulation



Sample description

- 37 males, 43 females
- Age range (18–41, mean of 22 years)
- 96% had gambled at least once in previous year: 80% on card games, 60% EGMs
- 36% scored 3+ on PGSI
- No gender differences in PGSI scores
- Drake belief scores higher in females

Manipulation Checks

- Did the pre-exposure programming work so as to deliver the required differences in return to player?
- Break-Even: 96% return (close!)
- Losing: 46% down on opening balance
- Winning: 150%

- Clear and significant differences in exposure to winning in free-play modes

Manipulation Checks 2

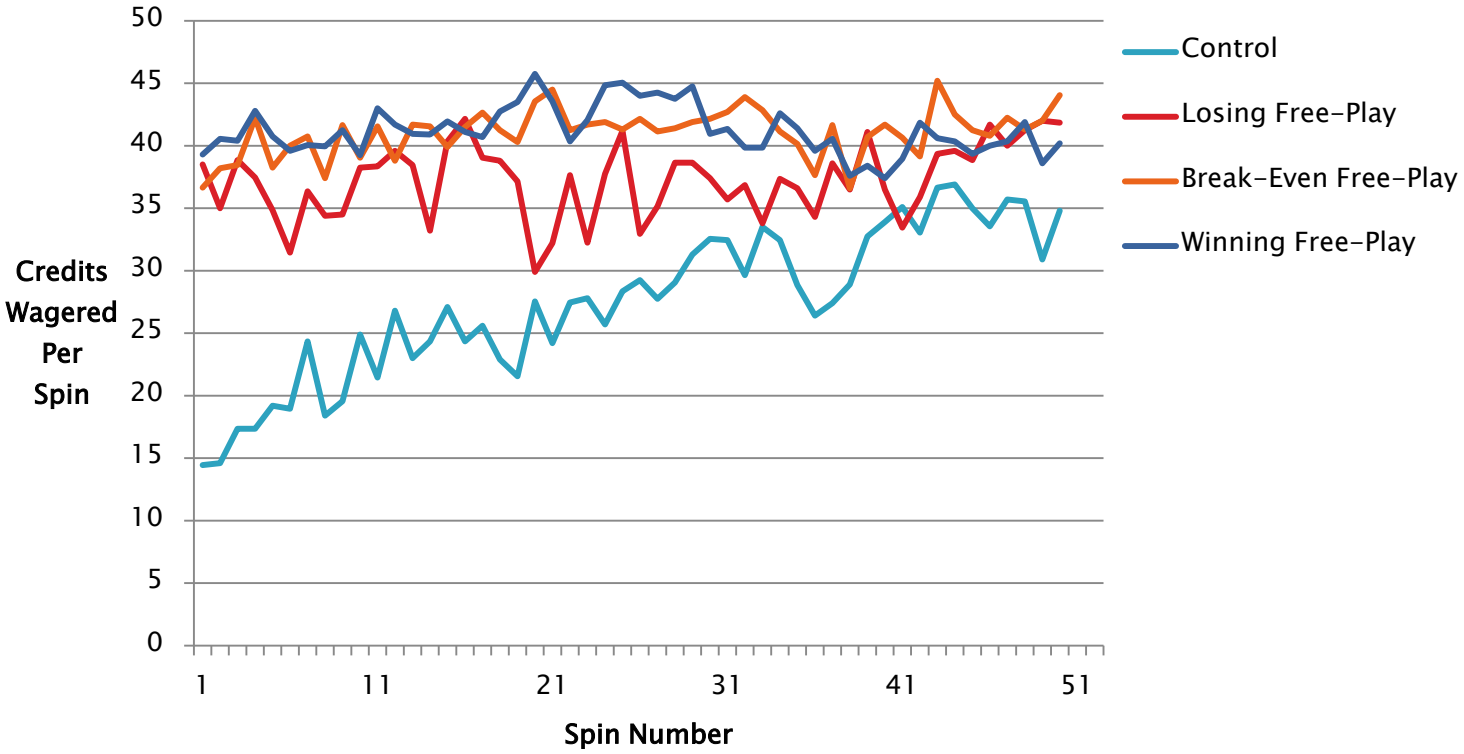
- Real-play mode
- Were the outcomes matched across these conditions?
- No significant differences in winnings
- Maximum credit balance reached
- Absolute range of credit balances

- Differences in experience under the random schedule unlikely to explain any differences in behaviour.

Risk-taking differences

Measure of Risk-Taking	Experimental Group				F (3,76)	η^2
	Control	Losing Free-Play	Break-Even Free-Play	Winning Free-Play		
Total credits wagered	1712.79 (1038.1)	2054.3 (753.0)	2428.3 (874.5)	2508.8 (1009.1)	3.14*	0.12
Total bets placed	148.55 (116.21)	112.00 (99.14)	148.50 (132.57)	104.50 (43.38)	1.03	0.04
Average bet size (credits)	17.04 (11.45)	26.34 (15.47)	23.63 (14.20)	26.63 (12.30)	2.19	0.08
Average credits / spin	28.27 (13.34)	37.43 (12.71)	41.05 (11.93)	41.08 (9.51)	5.10*	0.17
Bet/Pay Ratio[a]	6.17 (4.12)	4.92 (3.38)	9.22 (10.33)	4.67 (2.78)	2.34	0.09
Riskiness Index[b]	95.71 (91.47)	107.34 (84.25)	171.14 (224.96)	118.08 (77.44)	1.81	0.05

Betting patterns in real-play mode



Persistence

- How many extra spins would the different groups undertake in the real play mode (i.e., beyond the required 50)?
- One-way ANOVA< $F(3,31) = 2.96$, $p < .05$, (partial $\eta^2 = .22$).
- Losing Free-Play group completed significantly fewer extra spins than those in any of the other experimental groups ($p < .05$), winning group did not play longer

Post-experimental results

- Participants were asked to rate their skill at roulette and the level of control exerted
- Skill rating: control group gave lower ratings than the losing and winning groups
- Winning group gave higher proficiency scores than other groups after controlling for closing balance (explained 8% of variance in multiple regression)

General conclusions

- Exposure to free play modes (vs. control group) initially increases bet sizes
- Pre-exposure to losing sequences leads to less persistence in real-play
- Not a lot of differentiation based on type of pre-exposure. Pre-exposure itself seems to influence subsequent behaviour
- May be a familiarity effect (e.g., Langer, 1975), reduction in risk aversion in those who play for longer (i.e., in whose who get to practice)

Study 2: Simulated slot machine

- Slot machine: easier to manipulate and match outcomes across conditions
- Similar design: random allocation of participants to 1 of 4 pre-exposure conditions

Study 2: Design

- 1. Control (no practice)
- 2. Standard 90% return to player
- 3. Inflated return to player (150%)
- 4. Inflated return with pop-up messages to encourage play (e.g., “You are good at this game”, “Practice makes perfect”)

Sample Characteristics

- 128 participants (55 males, 73 females) recruited from the University of Adelaide campus.
- Inclusion criteria included: (i) being 18 years or older, (ii) gambling experience in the past 12 months and (ii) not currently receiving treatment for problem gambling

Slot machine simulation

Simulation was net-based and bounded data off a server so it was possible to run the experiment like a real Internet site without the requirement for downloads.

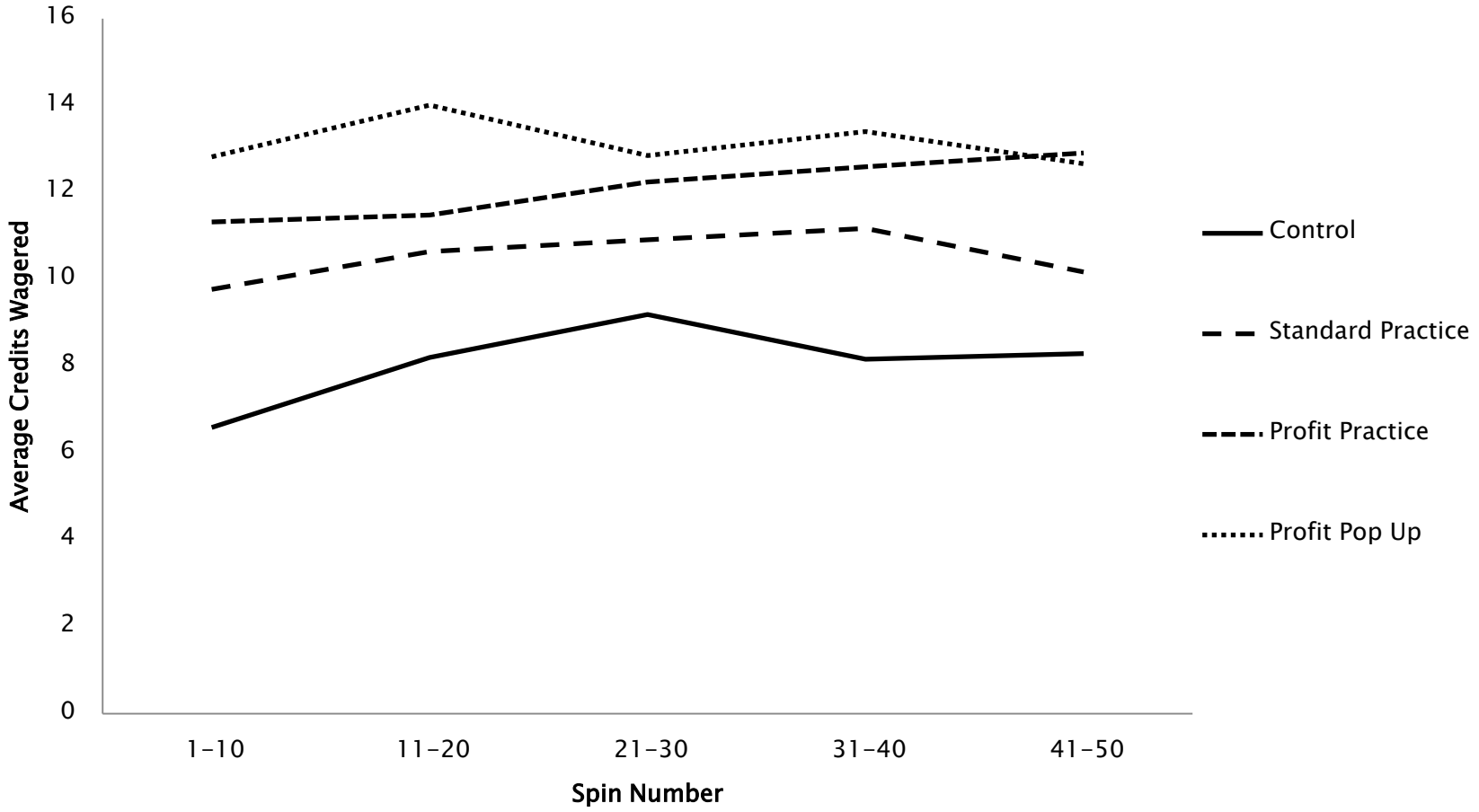
Procedure

- Participants played 50 spins in the pre-exposure period (apart from the control group)
- $10.00 worth of credits were provided and players were able to bet either 1, 5, 10 or 20 credits per spin (1 credit = $0.01).
- Test phase: After a participant had completed the minimum 50 spins, they were able to take their winnings or continue playing for up to another 50 spins.

Manipulation Checks

- Test phase:
- No significant differences across the experimental conditions in relation to minimum balance, $F(3, 124) = 2.66$, $p > .05$, maximum balance, $F(3,124) = 1.33$, $p > .05$, or closing credit balance, $F(3,124) = .44$, $p > .05$.
- Differences in behaviour in the test-phase could not be due to different outcomes in the different experimental groups.

Risk-taking differences



Behavioural persistence

Group	No. Persisted *n* (%)	Extra Spins			
		Minimum	Maximum	*M*	*SD*
Control	7 (20.6)	2	50	20.3	20.6
Standard Practice	5 (16.7)	4	50	28.4	20.6
Profit Practice	11 (33.3)	12	50	42.6	13.6
Profit Pop-up	13 (41.9)	2	50	34.0	19.0

Conclusions

- Risk-taking increased in line with the manipulations
- Exposed to the profit condition increased subsequent risk-taking; less effect on persistence
- Pop-up messages did not have any additional effect

Limitations

- Players not gambling with their own money
- Study used mainly students
- Players may not have persisted as long as normal because of the artificially of the experimental situation.
- Low prevalence of problem gambling in the sample: capacity to generalise to broader population of gamblers

Current work

- Examining profit conditions vs. control and standard return conditions
- Using sequence variations (early wins)
- Large wins
- Will combined effect on profit + early wins and/or large wins be greater than for profit only?