CENTRE for GAMBLING RESEARCH at UBC

Session 3B: Beyond the Laboratory – Research During a Global Pandemic

Chair: Luke Clark, University of British Columbia

9th March 2021

cgr.psych.ubc.ca twitter @CGR_UBC @LukeClark01

Disclosures

The Centre for Gambling Research at UBC is supported by the Province of BC government and the British Columbia Lottery Corporation.

LC holds further grants from the BC Ministry of Finance, and a Discovery Award from the Natural Sciences and Engineering Research Council of Canada (NSERC). He has received travel reimbursements from National Association of Gambling Studies (Australia) and National Center for Responsible Gaming (US), and consulting fees from Gambling Research Exchange Ontario (Canada) and National Center for Responsible Gaming (US).

Fiza Arshad has received consulting fees from Gambling Research Exchange Ontario (Canada)

CENTRE for
GAMBLING RESEARCH
at UBC

Schedule

- Gabriel Brooks: Gambling In Video Games – Current Questions

- Osa Hawthorne: Do Day-traders Show Gambling Biases? A Feasibility Study

- Fiza Arshad: Sensory Feedback, Immersion And Slot Machine Gambling: A Laboratory Study

- Mario Ferrari: Online Deployment Of A Fully Realistic Slot Machine 'Simulator'

- Xiaolei Deng: Behavioural Tracking Of Online Gambling On The PlayNow Platform

- Ke Zhang: Expressions Of Chasing In The eCasino

CENTRE for
GAMBLING RESEARCH
at UBC

CENTRE for GAMBLING RESEARCH at UBC

Gambling in Video Games – Current Questions.

Gabriel Brooks, PhD Candidate

9th March 2021
New Horizons in Responsible Gambling Conference, 2021

Increasing Convergence of Gambling and Video Games

- Three areas of convergence to be discussed:

    1) Loot Boxes

    2) "Skins" Betting

    3) Simulated Gambling in Video Games

Loot Boxes:

- Virtual items that produce randomly-generated in-game rewards, of varying desirability and rarity.

- Expenditure and risky use is linked to problem gambling and gambling-related cognitions.

Associations between loot box use, problematic gaming and gambling, and gambling-related cognitions

Gabriel A. Brooks[*], Luke Clark

Centre for Gambling Research at UBC, Department of Psychology, University of British Columbia, 2136 West Mall, Vancouver, BC V6T 1Z4, Canada

CENTRE for
GAMBLING RESEARCH
at UBC

Loot Boxes Cont.

- Direction of this relationship is unclear:

  1) Does loot box engagement promote future risky gambling behaviour ?

  2) Do gamblers prefer to engage with loot boxes ?

  3) Another explanation ?

"Skins" Betting:

- "Skin" is a term used for virtual items that change the appearance of something in-game.

- Using in-game "skins" as a token for making wagers or converting to a valuation via item marketplace price

CSGO Empire: Roulette Game

Journal of Gambling Studies (2019) 35:1109–1125
https://doi.org/10.1007/s10899-019-09840-5

ORIGINAL PAPER

The Same or Different? Convergence of Skin Gambling and Other Gambling Among Children

Heather Wardle[1]

Published online: 9 March 2019
© The Author(s) 2019

CENTRE for
GAMBLING RESEARCH
at UBC

Simulated Gambling:

- Playing video games that simulate gambling
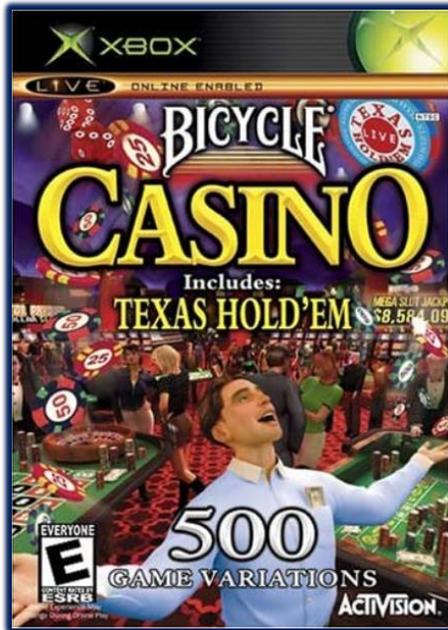
Bicycle Casino (2005)   *Red Dead Redemption 2*   *GTAV: Diamond Resorts*

Simulated Gambling Cont.
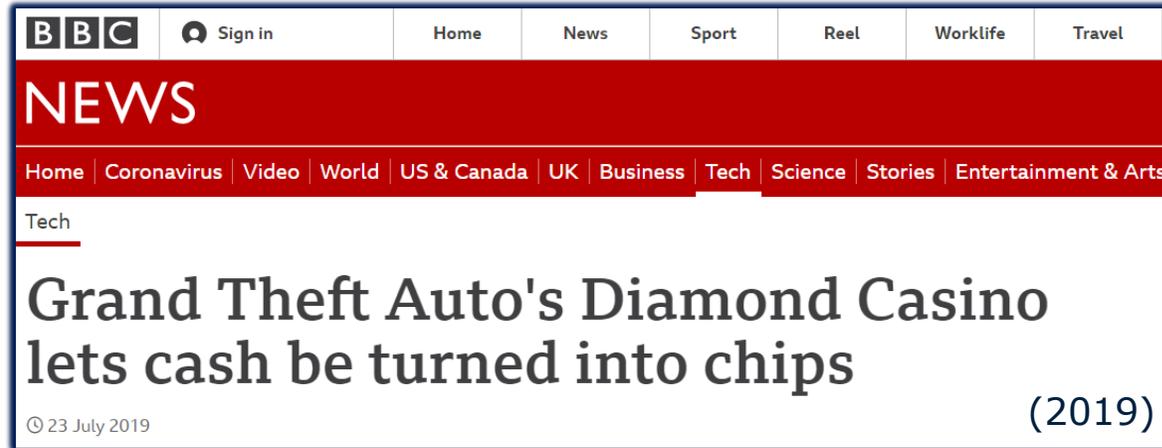
Grand Theft Auto's Diamond Casino lets cash be turned into chips

Tech

23 July 2019

(2019)

Do Social Casino Gamers Migrate to Online Gambling? An Assessment of Migration Rate and Potential Predictors

Hyoun S. Kim · Michael J. A. Wohl · Melissa M. Salmon · Rina Gupta · Jeffrey Derevensky

(2016)

CENTRE for GAMBLING RESEARCH at UBC

Research Significance

- Online Casinos to use Virtual Reality.

- Positive-sounding sounds are banned during losses disguised as wins (LDWs) in the UK.

- Increased gaps between spins in the UK.

Will the online casino Sector be the first to introduce fully immersive gaming experiences?

Avanti Buche — GAMING — Nov 4, 2020, 9:17 pm
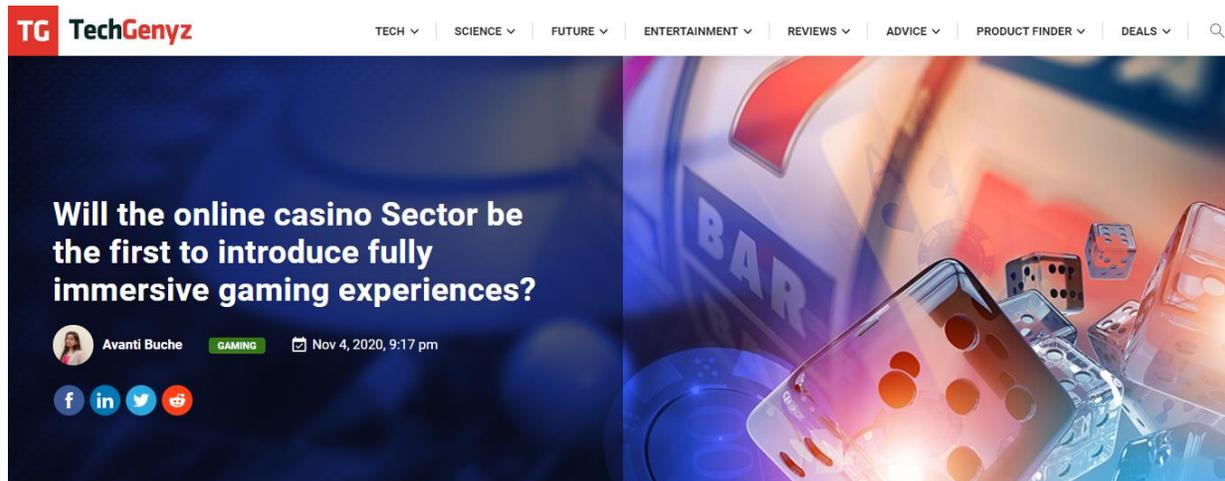
Gambling

Gambling firms in Great Britain ordered to slow down online slot machines

Machines also banned from playing positive-sounding noises when the player has lost money

Rob Davies
@ByRobDavies
Tue 2 Feb 2021 14.32 GMT
37

The UK gambling industry makes £2.2bn a year from online slot machines. Photograph: FocusTechnology/Alamy

Immersion and Audiovisual cues

- Immersion: 'zoned-in' focus on financial and performance-related information (Murch et al., 2020).

  - More time spent looking at credit window

- Higher immersion when playing a multi-line game or that with a large bet (Murch et al., 2017).

- Slot machine play with sound is more arousing and leads to overestimating number of wins (Dixon et al., 2014).

- Audiovisual cues increase risk-taking in a two-choice lottery task (Cherkasova et al., 2018).

Design
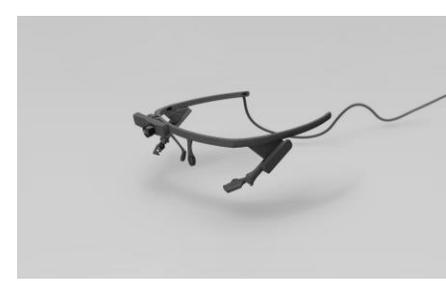
- Slot Machine Play while wearing Pupil Labs eye-tracking glasses

- Immersion Questionnaire

Fixation

Please indicate how much you felt the following while playing the game you just finished for each of the items below.

		Very slightly or not at all	A little	Mod erate ly	Quite a bit	Extre mely
1	I forgot everything around me	0	1	2	3	4
2	I felt like I was in a trance while playing the slot machine	0	1	2	3	4
3	I experienced a memory blackout for a period when I was playing the slot machine	0	1	2	3	4
4	I felt completely absorbed	0	1	2	3	4
5	I felt like I was outside of myself or watching myself play the slot machine	0	1	2	3	4
6	I felt like I took on a different identity while playing the slot machine	0	1	2	3	4
7	I lost track of time while playing the slot machine	0	1	2	3	4

Dissociation Questionnaire

Game Experience Questionnaire

CENTRE for GAMBLING RESEARCH at UBC

Design

1. Spinning Reels

2. Audiovisual Feedback

3. Spin Initiation Latency

Reference ← 1. Sensory Plus
2. Neutral
3. Sensory Minus
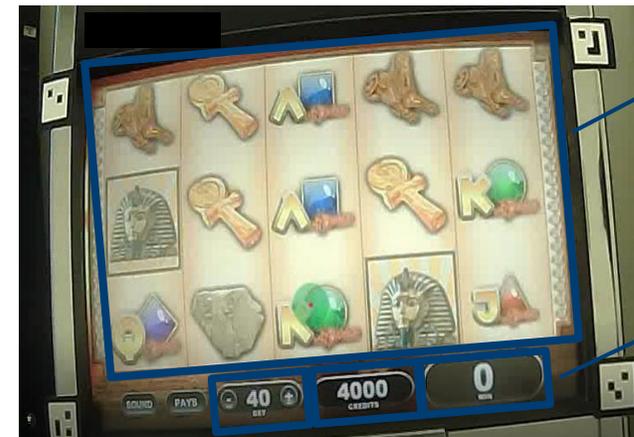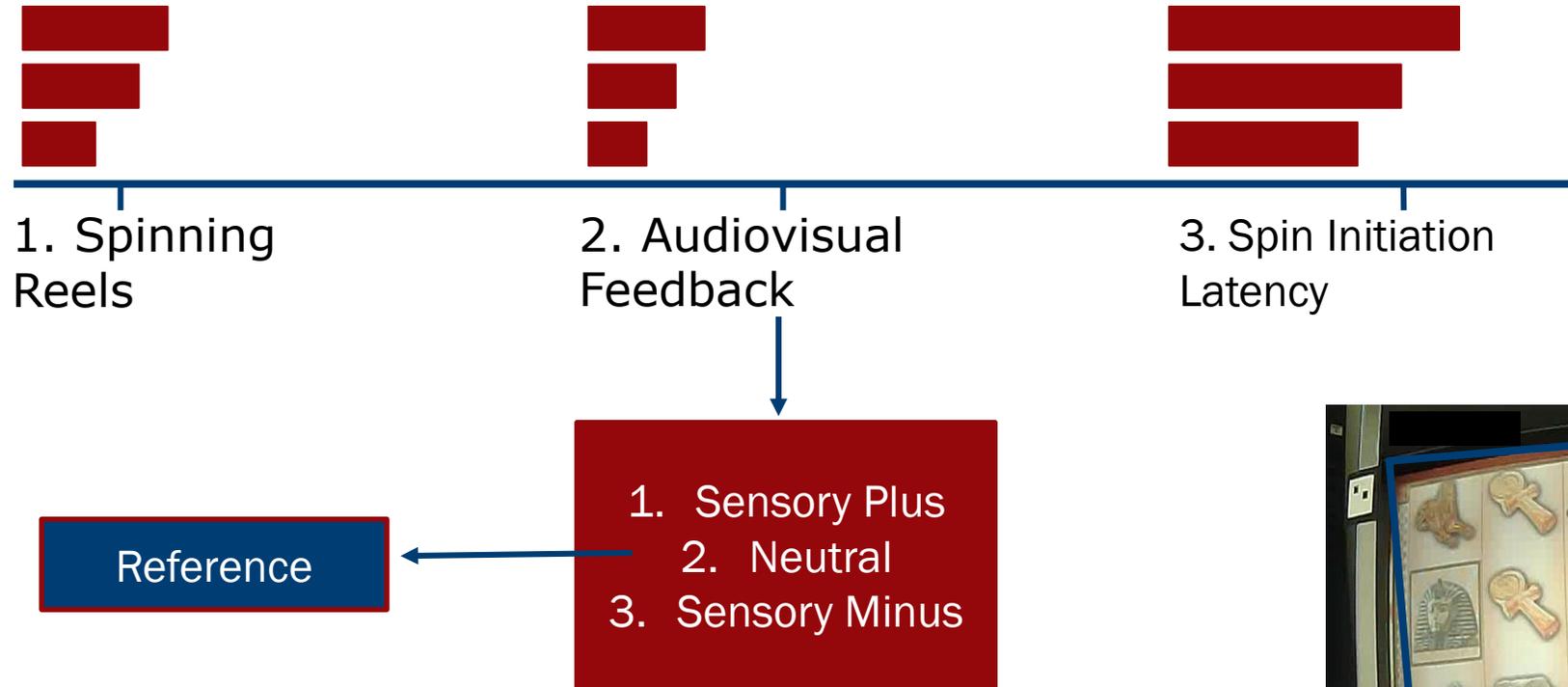
Reels

Lines Bet, Total Credits, Win

Preliminary Results

Males in the Plus condition reported a higher average immersion score in reference to those in Neutral.
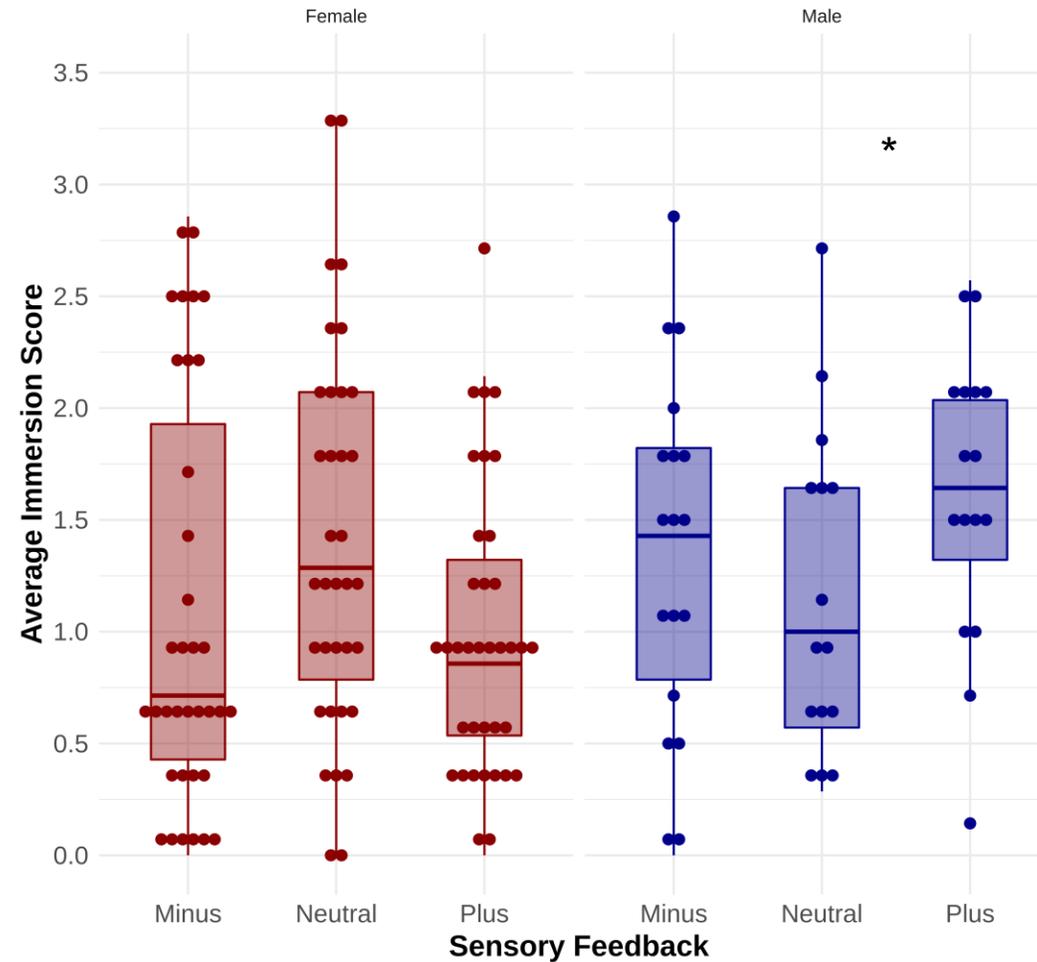
The changing landscape of slot machine research

Casino designs → Hybrid designs → Simulated designs → Online designs

CENTRE for GAMBLING RESEARCH at UBC
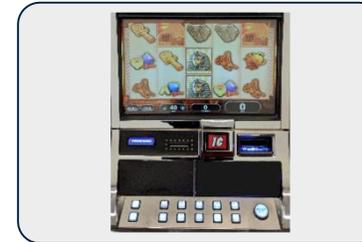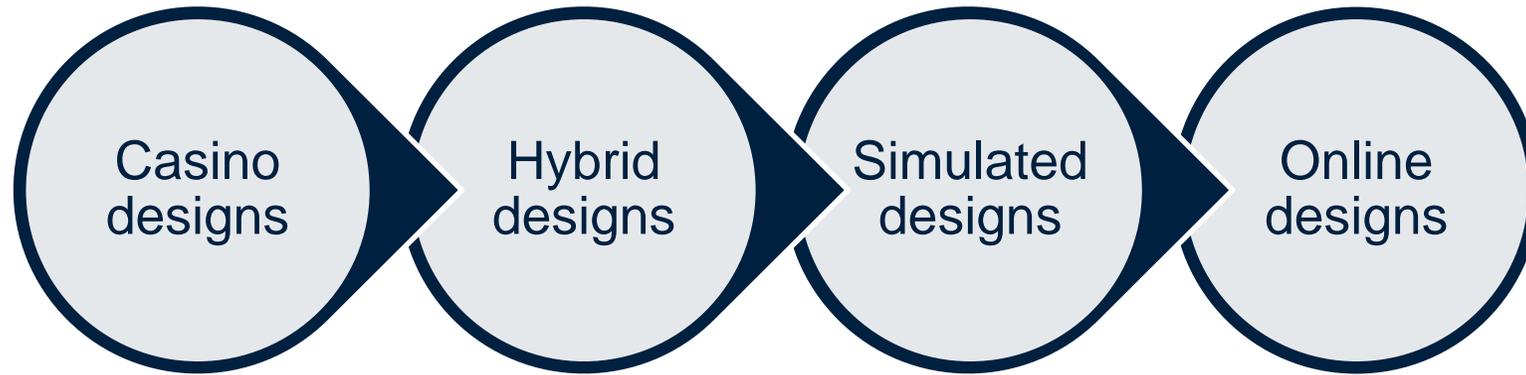
Existing tools for online slot machine research

- Current tools are limited in design, flexibility, and precision

- Study migration from lab to online is not possible for some behaviours / variables of interest

- Online user input differences may confound measurement of gambling behaviour

Cleo's Gold

Deploying a fully realistic slot machine simulation

- Technical barriers

  - Converting the code to web format

  - Measurement precision across platforms

  - Integration with survey platforms

Deploying a fully realistic slot machine simulation

- We first need to assess effects of UI variations

Future possibilities

- Online ability to modify and test behavioural and psychological effects of several product features
    - Sensory feedback (sounds, animations)
    - Wager outcomes (wins, losses, streaks)
    - Structural characteristics (reels, symbols, displays)

Objectives Behavioural Tracking

- To capture behavioural patterns of user population

- To predict user behaviour

- To test psychological models

- To offer intervention

Current Dataset

- 1 year dataset from PlayNow.com 'eCasino': 30,902 users, from Oct 2014 – Sept 2015, placing ~575 million bets

- De-identified data from PlayNow.com provided by BCLC, only accessible to BC residents

- 2,157 (7%) gamblers with self-exclusion status

Variables Constructed

date_key	prod...	pr...	channel			bet_amt	paid_amt	promo_amt	held_fund_bet_amt	win_amt	held_win_amt	net_sales_amt
20150514	ecasino	9435	web	..		0.4	0.4	0	0	0	0	0.4
20150514	ecasino	10920	web	..		2	2	0	0	0	0	2

Total Sessions

Total Bets

Bets per Session

Variance (Bets per Session)

Games per Session

Variance (Games per Session)

Total Money Bet

Money Bet per Session

Variance (Money Bet per Session)

Days Gambled

Sessions per Day

Bets per Day

Average Session Length

Variance (Average Session Length)

Total Money Bet from Promotional Offers

Promotional Bets per Session

Total Net Loss

Net Loss per Session

Total Net Win

Net Win per Session

Capture Behavioural Patterns

Pareto ranked by net loss

Pareto ranked by number of bets
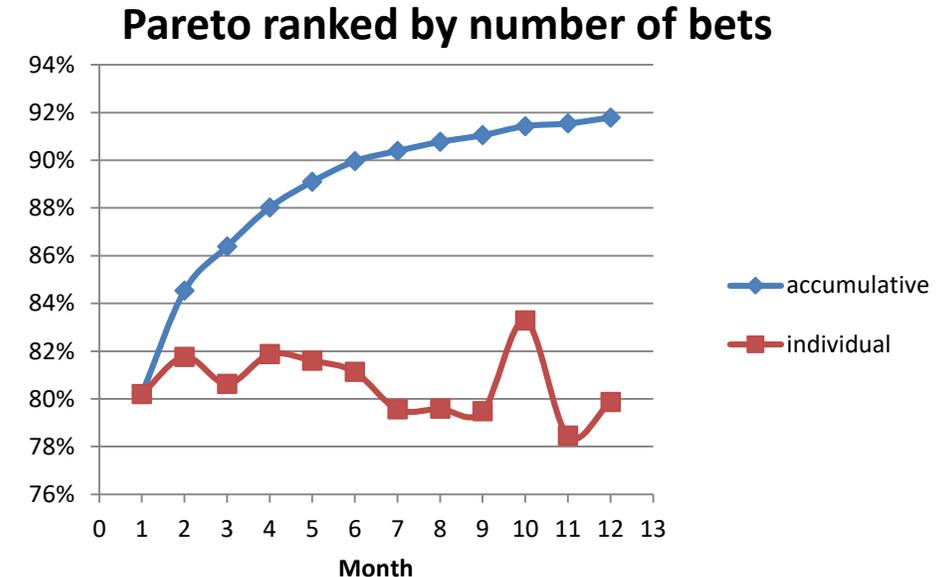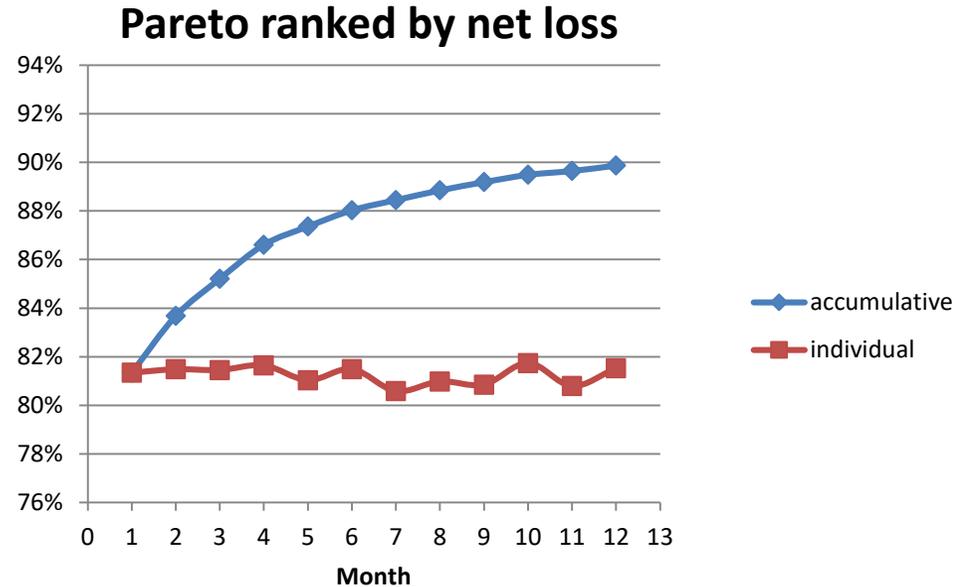
- Pareto estimate increases with data window
- Plateau after ~12 months at approx 90% for net loss, 92% for total bets
- Why? The top 20% are more loyal in subsequent months, the other 80% come and go

Deng, Lesch & Clark, under review

CENTRE for
GAMBLING RESEARCH
at UBC

Predicting User Behaviours

Random Forest Classification Feature Importance

VSE
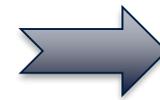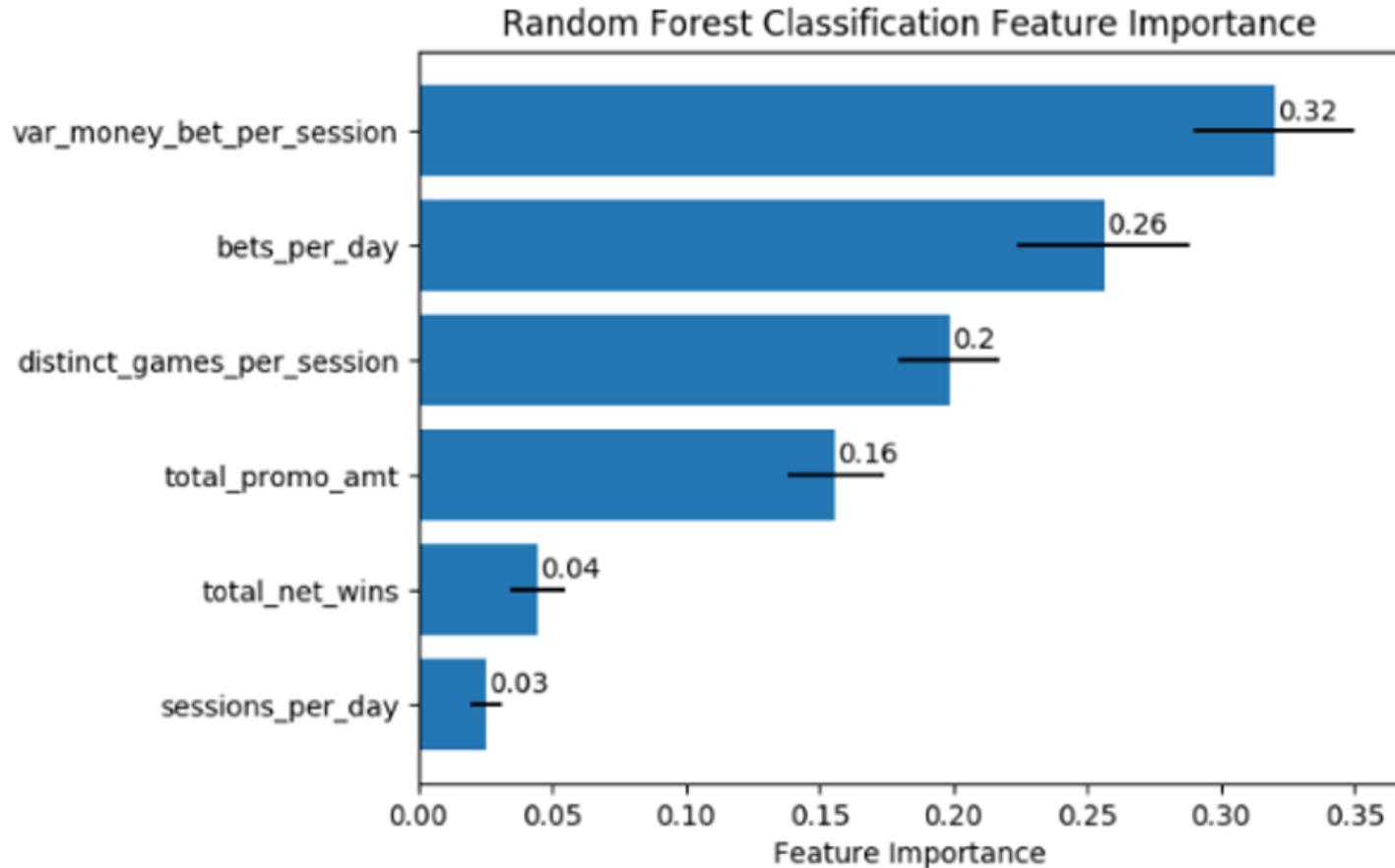
CENTRE for
GAMBLING RESEARCH
at UBC

Combining sources of risk data

Behavioural 'play' data (frequency, intensity, variability…)

Demographics (gender, age, time of day, geography)

Financial behaviour (deposits, withdrawals)

Operator communication (complaints, text analysis)
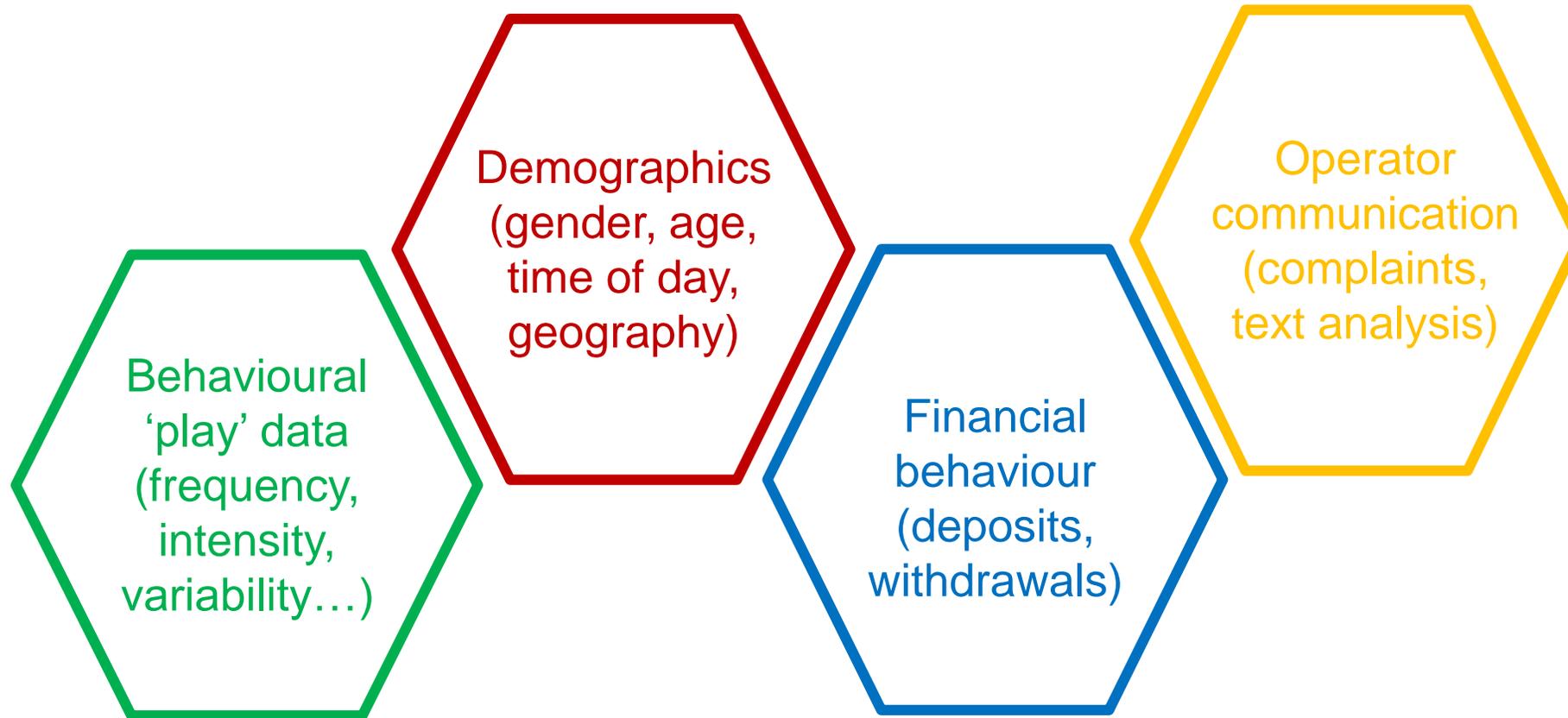
CENTRE for GAMBLING RESEARCH at UBC

Expressions of Chasing in the eCasino

BCLC PlayNow Data

Ke Zhang, PhD student

March 9th, 2021
New Horizons in Responsible Gambling Conference

a place of mind
THE UNIVERSITY OF BRITISH COLUMBIA

Department of Psychology

Loss-Chasing

- Diagnostic tools (e.g., DSM-5): if the gambler returns another day to recoup losses.

- The most endorsed item for gambling disorder (Hodgins et al., 2011).

- The defining feature of problem gamblers (Lesieur, 1984).

eCasino Loss-Chasing?

- Do online gamblers return to PlayNow faster if they lost more in the previous visit or session?

- How does this time to return vary between slots, video poker, table games?

Time to Return in eCasino

- Players: 9,775 (one-month data)
- Gambling sessions 135,330

	Slots (S) session n = 109,230	Table games (T) n = 21,520	Video poker (V) n = 4,580	*Chi-square*	*p-value*	*Pairwise*
Players	7,991	2,416	472			
Total Loss (dollar)	64.24 (1915.42)	54.00 (3037.04)	48.00 (1957.55)	64.82	< 0.001	S > T, V
Time interval (hr)	12.68 (151.41)	13.00 (271.89)	10.55 (174.12)	62.27	< 0.001	T > S > V

Table 1. Median (SD). Kruskal-Wallis test was used to exam the differences of *loss* and *time interval* between slots, table games, and video poker due to positively skewed distributions.

CENTRE for
GAMBLING RESEARCH
at UBC

Do Gamblers Return Faster After Losses?
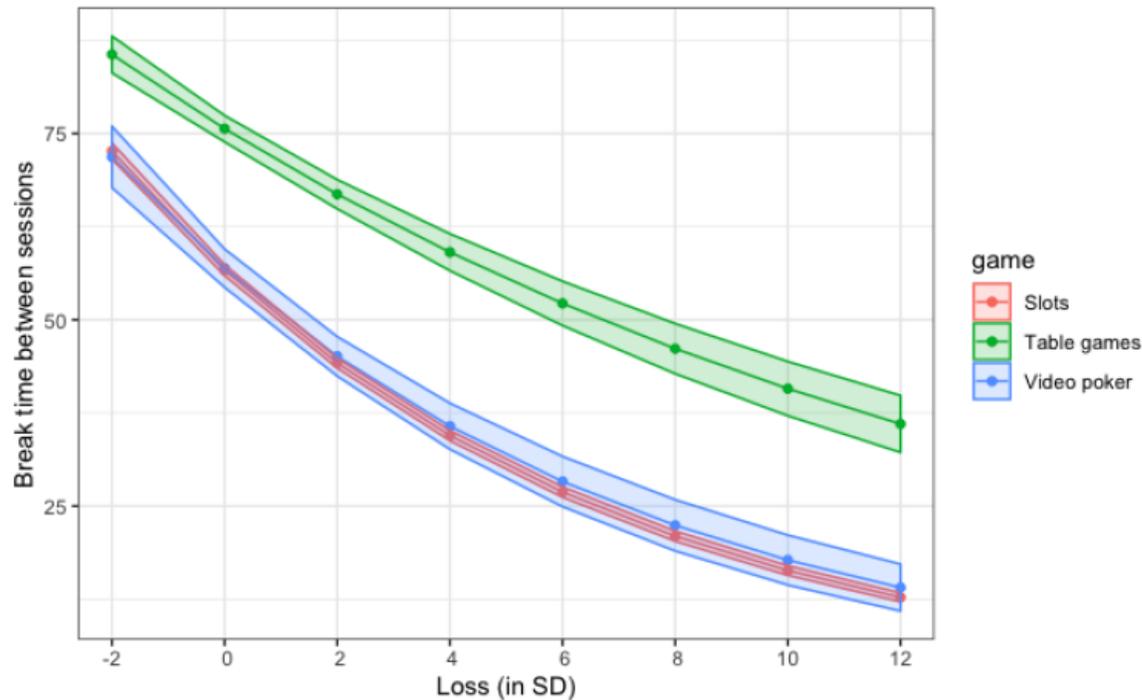
- With larger prior losses, gamblers returned faster across all three game types.

- The loss-chasing tendency varied by game types.
  - Gamblers in table games returned slower than slots and video pokers.

CENTRE for
GAMBLING RESEARCH
at UBC