The application of Big Data in the prevention of Problem Gambling

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Biographie

- PhD in Psychology from Nottingham Trent University

- Masters degree in Statistics from University of Vienna

- Focused on player tracking, feedback, identification of problematic play

- > 20 publications on player tracking and personalized feedback

- Data Science projects for numerous online and land-based gambling companies

- Consultancy for gambling companies & regulators

- Frequent speaker at conferences

OVERVIEW OF TALK

- Social responsibility in gambling

- Where does responsibility for gambling behaviour lie?

- Types of online RG tools

- The rise of behavioural tracking

- Briefly outline some RG studies using tracking data

- Implications of tracking for identifying problem gambling

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Compulsive gambling
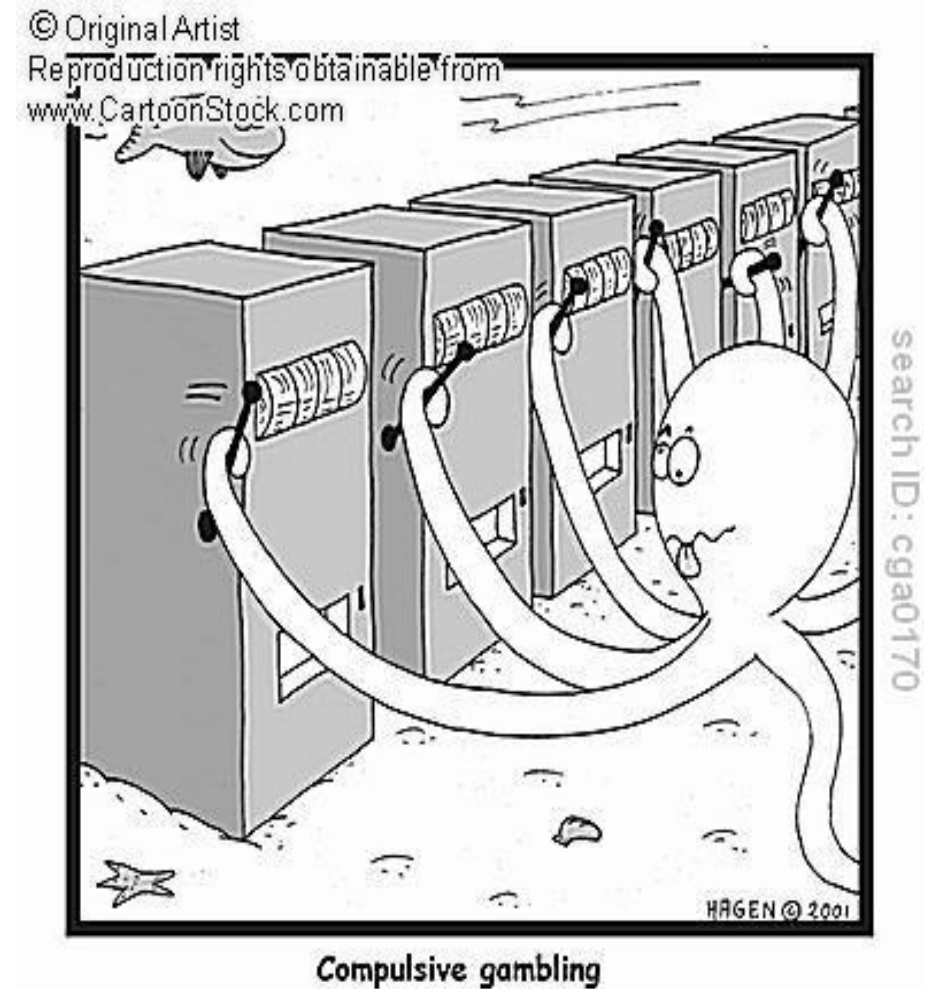
PROTECTING THE VULNERABLE

MAXIMISING FUN

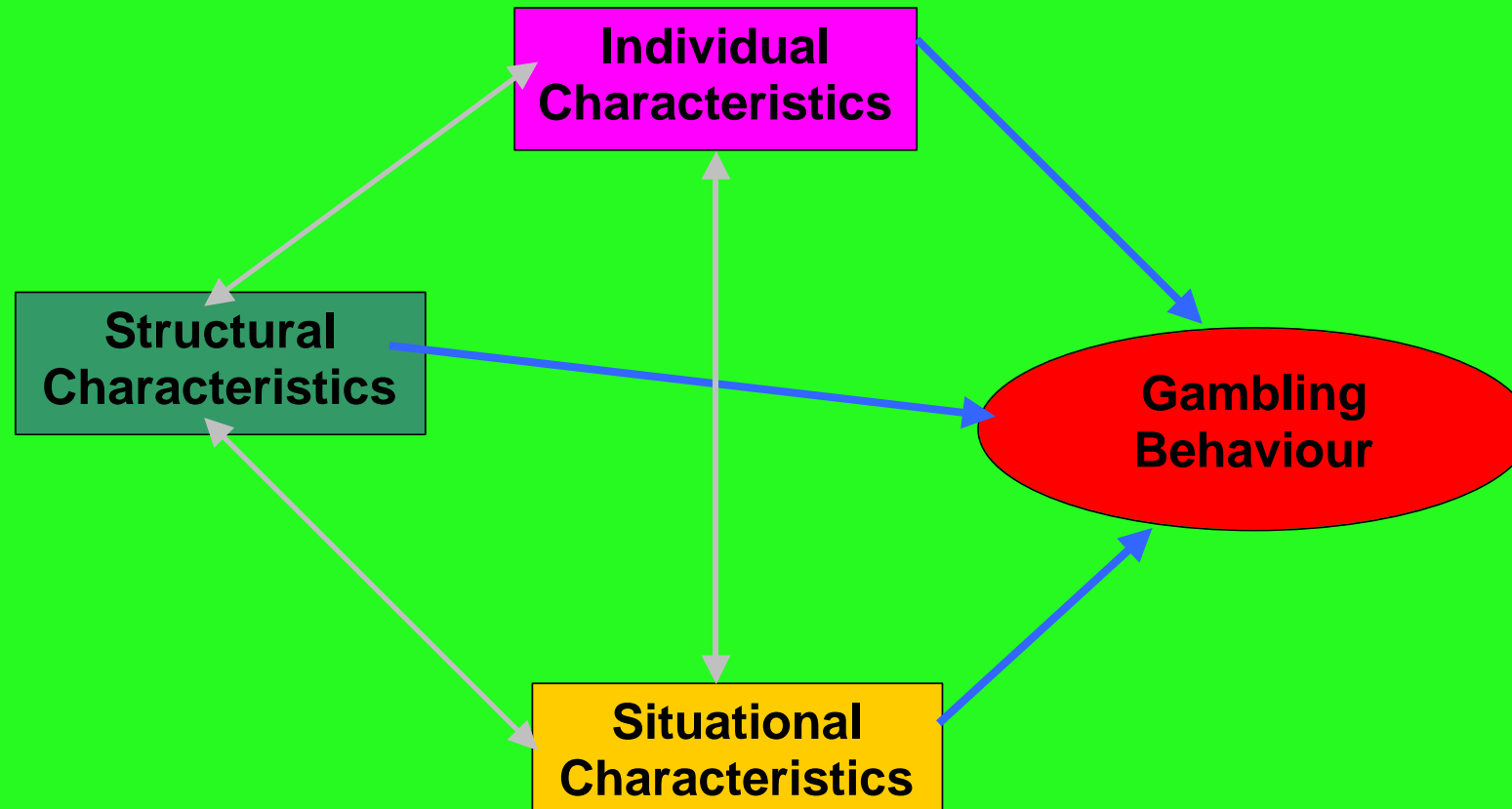**MINIMISING HARM**

WHERE DOES RESPONSIBILITY LIE?
INFLUENCES ON GAMBLING BEHAVIOUR
(Griffiths & Delfabbro, 2001)

TYPES OF ONLINE RG TOOLS
(Harris & Griffiths, 2017)

- Breaks in play

- Limit setting

- Messaging (static vs dynamic)

- Pop-up messaging

- Personalized messaging

- Behavioural tracking tools

A Critical Review of the Harm-Minimisation Tools Available for Electronic Gambling

Andrew Harris[1] · Mark D. Griffiths[1]

Abstract The increasing sophistication of gambling products afforded by electronic technologies facilitates increased accessibility to gambling, as well as encouraging rapid and continuous play. This poses several challenges from a responsible gambling perspective, in terms of facilitating player self-awareness and self-control. The same technological advancements in gambling that may facilitate a loss of control may also be used to provide responsible gambling tools and solutions to reduce gambling-related harm. Indeed, several harm-minimisation strategies have been devised that aim to facilitate self-awareness and self-control within a gambling session. Such strategies include the use of breaks in play, 'pop-up' messaging, limit setting, and behavioural tracking. The present paper reviews the theoretical argument underpinning the application of specific harm-minimisation tools, as well as providing one of the first critical reviews of the empirical research assessing their efficacy, in terms of influencing gambling cognitions and behaviour.

WHAT IS BIG DATA?
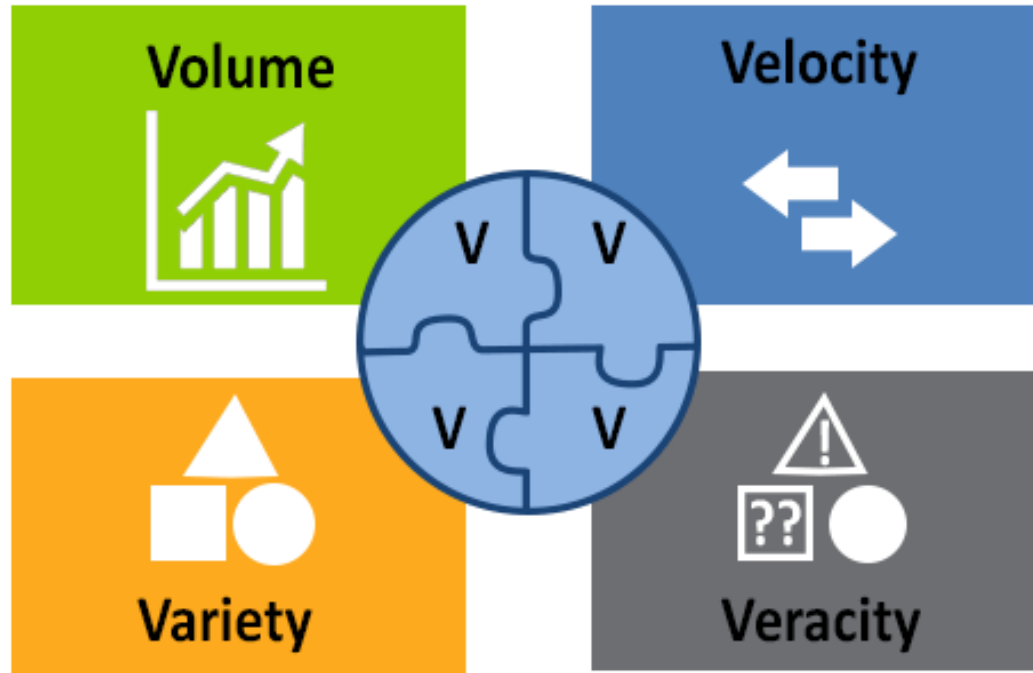
BIG DATA

- We need data to apply algorithms

- Card based gambling

- Online gambling

THEORETICAL LOSS IN GAMBLING
(Auer & Griffiths, 2014; 2015)

- We define gambling intensity as the amount of money that players are putting at risk when playing.

- This might be considered easy to do (e.g., by using 'amount staked' or 'bet size'), but the element of chance is rarely accounted for, especially when a random win occurs.

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WINNING LOTTERY NUMBER
901

LOTTERY TICKET 901

Dave Carpenter "DARN!"

search ID: dcrn89

- For instance, two gamblers putting the same amount of money at risk might end up with different wins/losses at the end of similar length gambling sessions because of chance.

- For this reason, we use a measure that is completely independent of random events and takes into account the true amount of money that players are prepared to risk (bet size multiplied by house advantage).

Snapshots at jasonlove.com

GAMBLERS ANONYMOUS

"Betcha I recover before you do."

THEORETICAL LOSS SIMULATION STUDY
(Auer, Schneeberger & Griffiths, 2012)

- Simulation study of 300,000 online gamblers over 13 game types

- Bet size explained 56% of the variance leaving 44% unexplained

- Number of games played explained 32% of the variance leaving 68% unexplained

- Next study replicated this using real online gambler behavioural tracking data.

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Articles

Theoretical Loss and Gambling Intensity:
A Simulation Study

Michael Auer, Andreas Schneeberger, and Mark D. Griffiths

MANY RECENT STUDIES OF INTERNET GAMBLING—particularly those that have analysed behavioral tracking data—have used variables such as "bet size" and "number of games played" as proxy measures for "gambling intensity."[1] However, neither bet size nor the number of games played takes into account the house advantage of a game. Players are risking less when they play games with low house advantages. A low house advantage, therefore, corresponds to a high payout. Furthermore, data presented from these studies have typically been presented by game type (e.g., data are only presented from online sports bettors or online poker players). However, using a concise simulation analysis of online gamblers playing a variety of games, this short article argues that bet size cannot be reliably used across games and/or game types as a measure of gambling intensity.

Griffiths and Auer[2] outlined the many advantages and disadvantages of using behavioral tracking data in the gambling studies field. The main advantages of behavioral tracking data are that it (a) provides a totally objective record of an individual's gambling behavior on a particular online gambling Web site; (b) provides a record of events and can be revisited after the event itself has finished; and (c) usually comprises very large sample sizes. These are the main reasons that such data will be used here.

In this article, we describe what we believe is the best and most stable measure for "gambling intensity." This measure is the "theoretical loss." In the

long run, outcomes in games of chance are always dependent on the house advantage: games with a big house advantage lead to higher losses for the gambler, while games with a lesser house advantage lead to lower losses. For instance, lottery games typically have relatively high house advantages (e.g., 50%), whereas casino games typically have relatively low house advantages: roulette games with a single "zero (0)" on their wheels, for example, have a house advantage of 2.7%.

The "loss/win" variable—often referred to as the gross gaming revenue (GGR)—is the difference between "total bet" and "total win." However, as a measure of a player's gambling intensity, it is not suitable, as it is typically distorted by the occasional winning occurrences by gamblers, particularly in the short-term. In the very long run, GGR is a

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[2] M.D. Griffiths and M. Auer, *Online versus offline gambling: Methodological considerations in empirical gambling research*, 7(3) CASINO & GAMING INT'L 45–48 (2011).

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THEORETICAL LOSS EMPIRICAL STUDY
(Auer & Griffiths, 2014; 2015)

- Empirical study of 100,000 online gamblers over eight game types on *win2day* site

- Bet size explained 72% of the variance leaving 28% unexplained

- Difference because house advantages are not as different as assumed in previous simulation study.

- This lack of accuracy is even more pronounced for gamblers who play a variety of games.

**Theoretical Loss and Gambling Intensity (Revisited):
A Response to Braverman et al. (2013)**

Michael Auer · Mark D. Griffiths

Abstract In this paper, we provide a brief response to Braverman et al. (J Gambl Stud. doi:10.1007/s10899-013-9428-z, 2013b) critique of our 'Theoretical Loss' metric as a measure of monetary gambling intensity (Auer and Griffiths in J Gambl Stud. doi:10.1007/s10899-013-9376-7, 2013a; Auer et al. in Gaming Law Rev Econ 16:269–273, 2012). We argue that 'gambling intensity' and 'gambling involvement' are essentially the same construct as descriptors of monetary gambling activity. Additionally, we acknowledge that playing duration (i.e., the amount of time—as opposed to money—actually spent gambling) is clearly another important indicator of gambling involvement—something that we have consistently noted in our previous studies including our empirical studies on gambling using behavioural tracking data. Braverman and colleagues claim that the concept of Theoretical Loss is nullified when statistical analysis focuses solely on one game type as the house edge is constant across all games. In fact, they state, the correlation between total amount wagered and Theoretical Loss is perfect. Unfortunately, this is incorrect. To disprove the claim made, we demonstrate that in sports betting (i.e., a single game type), the amount wagered does not reflect monetary gambling involvement using actual payout percentage data (based on 52,500 independent bets provided to us by an online European bookmaker). After reviewing the arguments presented by Braverman and colleagues, we are still of the view that when it comes to purely monetary measures of 'gambling intensity', the Theoretical Loss metric is a more robust and accurate measure than other financial proxy measures such as 'amount wagered' (i.e., bet size) as a measure of what players are prepared to financially risk while gambling.

LIMIT SETTING

- Play limit – This is the maximum amount of money (or time) that a gambler can play with (or for) at any given time.

- Deposit limit – This is the maximum amount of money that a gambler can deposit into their playing account at any given time.

- Bet limit – This is the maximum amount of money that a gambler can bet on a single game (or concurrent games).

- Loss limit – This is the maximum amount of money that a gambler can lose in any one session or sessions.

LIMIT SETTING EMPIRICAL STUDY
(Auer & Griffiths, 2013)

- Data collected from a representative random sample of 100,000 players who gambled on the *win2day* gambling website

- During a three-month period, all voluntary time and/or money limit setting behaviour by a subsample of online gamblers (n=5000) within this mandatory framework was tracked and recorded for subsequent data analysis.

- From the 5,000 gamblers, the 10% most intense players (as measured by theoretical loss) were further investigated.

Voluntary Limit Setting and Player Choice in Most Intense Online Gamblers: An Empirical Study of Gambling Behaviour

Michael Auer · Mark D. Griffiths

Abstract Social responsibility in gambling has become a major issue for the gaming industry. The possibility for online gamblers to set voluntary time and money limits are a social responsibility practice that is now widespread among online gaming operators. The main issue concerns whether the voluntary setting of such limits has any positive impact on subsequent gambling behaviour and whether such measures are of help to problem gamblers. In this paper, this issue is examined through data collected from a representative random sample of 100,000 players who gambled on the *win2day* gambling website. When opening an account at the *win2day* site, there is a mandatory requirement for all players to set time and cash-in limits (that cannot exceed 800 € per week). During a 3-month period, all voluntary time and/or money limit setting behaviour by a subsample of online gamblers (n = 5,000) within this mandatory framework was tracked and recorded for subsequent data analysis. From the 5,000 gamblers, the 10 % most intense players (as measured by theoretical loss) were further investigated. Voluntary spending limits had the highest significant effect on subsequent monetary spending among casino and lottery gamblers. Monetary spending among poker players significantly decreased after setting a voluntary time limit. The highest significant decrease in playing duration was among poker players after setting a voluntary playing duration limit. The results of the study demonstrated that voluntary limit setting had a specific and significant effect on the studied gamblers. Therefore, voluntary limits appear to show an appropriate effect in the desired target group (i.e., the most gaming intense players).

Keywords Online gambling · Responsible gambling · Social responsibility in gambling · Limit setting · Online lotteries · Online poker · Online casinos

- Voluntary spending limits had the highest significant effect on subsequent monetary spending among casino and lottery gamblers.

- Monetary spending among poker players significantly decreased after setting a voluntary time limit.

- The highest significant decrease in playing duration was among poker players after setting a voluntary playing duration limit.

Signs You Play Too Much Texas Hold 'Em

- The results of the study demonstrated that voluntary limit setting had a specific and significant effect on the studied gamblers.

- Therefore, voluntary limits appear to show voluntary limit setting had an appropriate effect in the desired target group (i.e., the most gaming intense players).

ATM

I WON! I WON!

Bill's slot machine addiction has really gotten out of hand.

Financial Funnies #139   © www.kluth.org/cartoons.htm

SLOTS POP-UP EMPIRICAL STUDY 1
(Auer, Malischnig & Griffiths, 2014)

- This study investigated the effects of a slot machine pop-up message in a real gambling environment

- Compared the behavioural tracking data of two representative random samples of 400,000 gambling sessions before and after the pop-up message was introduced

- Pop-up appeared after 1000 consecutive plays

Is "pop-up" messaging in online slot machine gambling effective as a responsible gambling strategy?

Michael Auer,[1] Doris Malischnig,[2] & Mark Griffiths[3]

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[2]Österreichische Lotterien GmbH, Vienna, Austria
[3]Nottingham Trent University, Nottingham, UK

Abstract

Certain gambling operators now provide social responsibility tools to help players gamble more responsibly. One such innovation is the use of pop-up messages that aim to give feedback to the players about the time and money they have thus far spent gambling. Most studies of this innovation have been conducted in laboratory settings, and although controlled studies are indeed more reliable than real-world studies, the non-ecological validity of laboratory studies is still an issue. This study investigated the effects of a slot machine pop-up message in a real gambling environment by comparing the behavioural tracking data of two representative random samples of 400,000 gambling sessions before and after the pop-up message was introduced. The study comprised approximately 200,000 gamblers. The results indicated that, following the viewing of a pop-up message after 1000 consecutive gambles on an online slot machine game, nine times more gamblers ceased their gambling session than did those gamblers who had not viewed the message. The data suggest that pop-up messages can influence a small number of gamblers to cease their playing session, and that pop-ups appear to be another potentially helpful social responsibility tool in reducing excessive play within session.

- (Comprising around 50,000 gamblers in total; approx 10,000 sessions reached 1,000 consecutive plays)

- The results indicated that demonstrably more gamblers ceased their gambling session following the viewing of a pop-up message after 1000 consecutive gambles on an online slot machine game compared to those who had not viewed a pop-up message.
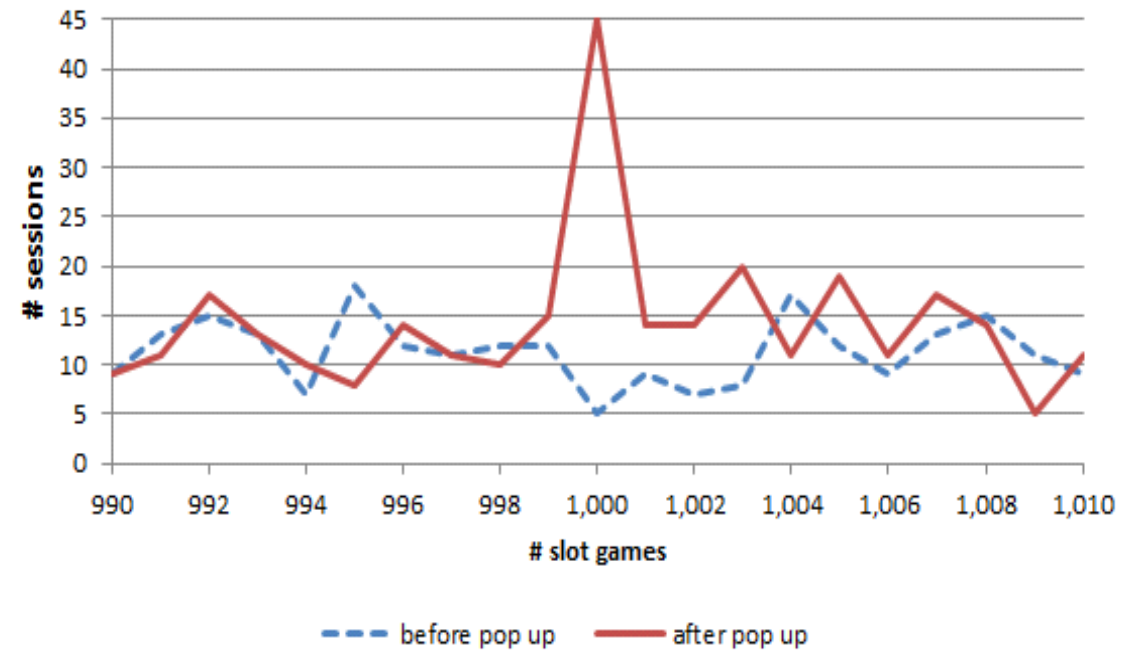
SLOTS POP-UP EMPIRICAL STUDY 2
(Auer & Griffiths, 2015)

- Self-appraisal feedback, normative feedback, and cognitive belief feedback, have never been empirically examined in any real-world online gambling setting.

- A 2nd study investigated the effects of a normative and self-appraisal pop-up message among online slot machine players on a real online gambling site (i.e., *win2day*)

Testing normative and self-appraisal feedback in an online slot-machine pop-up in a real-world setting

Michael M. Auer[1]* and Mark D. Griffiths[2]

[1] neccton ltd., London, UK, [2] Gaming Research Unit, Psychology Division, Nottingham Trent University, Nottingham, UK

Over the last few years, there have been an increasing number of gaming operators that have incorporated on-screen pop-up messages while gamblers play on slot machines and/or online as one of a range of tools to help encourage responsible gambling. Coupled with this, there has also been an increase in empirical research into whether such pop-up messages are effective, particularly in laboratory settings. However, very few studies have been conducted on the utility of pop-up messages in real-world gambling settings. The present study investigated the effects of normative and self-appraisal feedback in a slot machine pop-up message compared to a simple (non-enhanced) pop-up message. The study was conducted in a real-world gambling environment by comparing the behavioral tracking data of two representative random samples of 800,000 gambling sessions (i.e., 1.6 million sessions in total) across two conditions (i.e., simple pop-up message versus an enhanced pop-up message). The results indicated that the additional normative and self-appraisal content doubled the number of gamblers who stopped playing after they received the enhanced pop-up message (1.39%) compared to the simple pop-up message (0.67%). The data suggest that pop-up messages influence only a small number of gamblers to cease long playing sessions and that enhanced messages are slightly more effective in helping gamblers to stop playing in-session.

Keywords: online gambling, responsible gambling, online slot machines, pop-up messaging, normative feedback, ecological validity, behavioral tracking, health messaging

Introduction

The increasingly advanced technological environments of online gambling companies now allow for sophisticated ways of promoting responsible play among gamblers (Griffiths et al., 2009; Auer and Griffiths, 2013). The use of pop-up messages that appear on-screen while an individual is gambling on a slot machine and/or online is one way of informing players about how much time they have been playing and/or how much money they have spent. Pop-up messages are one of a range of tools that have been increasingly used by gaming operators to help encourage responsible gambling (Griffiths, 2012). Providing specific information in the form of messages to players while gambling is one way of intervening and helping gamblers that play excessively. It is believed that information that is given to people to enable behavioral change should encourage reflection as research has shown that self-monitoring changes behavior in the desired direction (e.g., Gilberts et al., 2001; Hardeman et al., 2002; Schwedes et al., 2002). However, it remains to be determined whether these pop-up interventions deliver the desired effects among the players that receive such messaging.

- In September 2013, the content of the *win2day* pop-up message was changed and

- New pop-up addressed self-appraisal, provided normative feedback, and addressed cognitive beliefs commonly found among gamblers.

- The new pop-up message (translated from German, the native language used on the Austrian site) reads:

- *"We would like to inform you, that you have just played 1,000 slot games. Only a few people play more than 1,000 slot games. The chance of winning does not increase with the duration of the session. Taking a break often helps, and you can choose the duration of the break"*

- The reasoning behind the messaging is as follows:

- The reasoning behind the messaging is as follows:

- **"We would like to inform you, that you have just played 1,000 slot games":** This objectively informs players about the behavior they engaged in.

- **"Only a few people play more than 1,000 slot games":** This provides normative feedback. Only 1.5% of playing sessions exceeds 1,000 consecutive slot games

- **"The chance of winning does not increase with the duration of the session":** This addresses a common misbelief among gamblers (i.e., the gamblers' fallacy).

- **"Taking a break often helps, and you can choose the duration of the break":** This provides advice and leaves the decision up to the player and is in line with the techniques of motivational interviewing *(Millner & Rollnick, 1991)*

- Accessed two representative random samples of 800,000 sessions before and after the pop-up message was changed.

- The total dataset comprised 1,600,000 game sessions that contained at least one slot game (70,000 gamblers).

- We hypothesized that the changed message content would lead to an increase in gamblers terminating their gambling session after playing 1,000 consecutive slot games compared to the previous message *(i.e., Auer et al, 2014).*

- Of the 11,232 sessions that lasted at least 1,000 games prior to the pop-up message change, 75 sessions immediately terminated after the simple pop-up message was shown (0.67%).

- After the new pop-up was introduced, 169 sessions (of 11,878) immediately terminated when the pop-up message was shown at 1,000 consecutive slot games (1.39%).
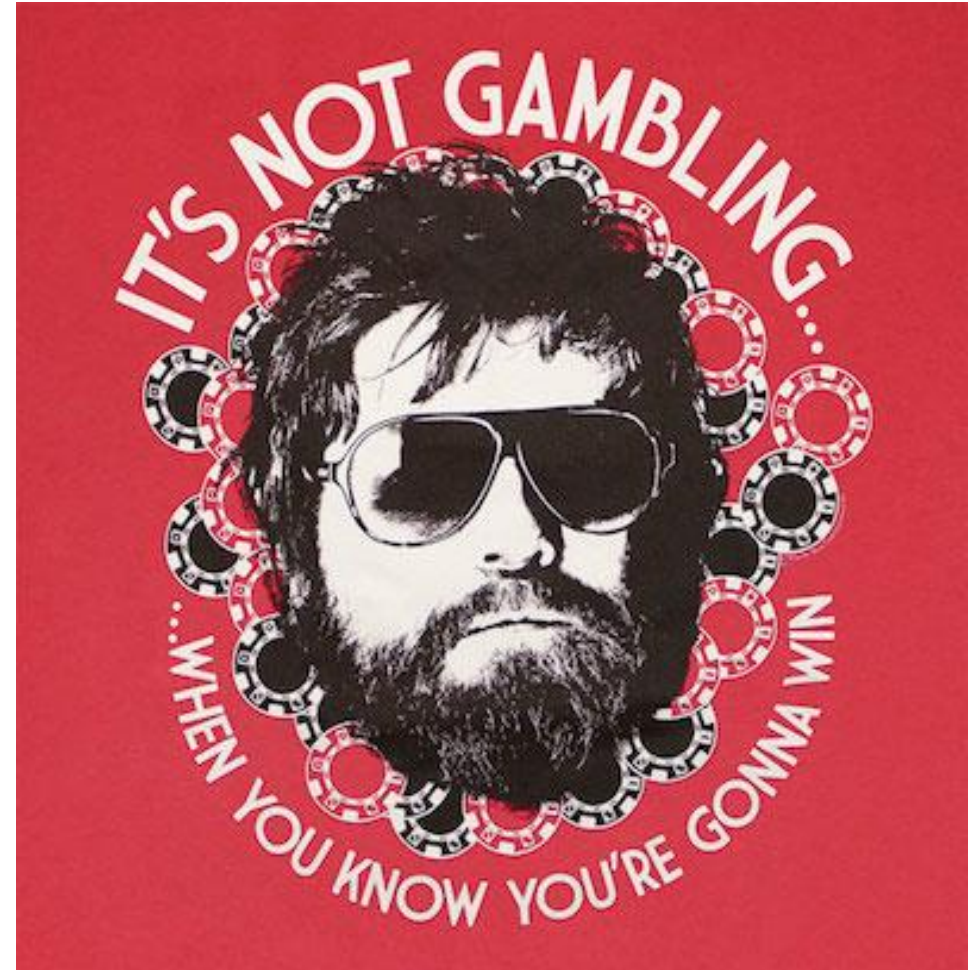
Number of sessions ended between 990 and 1,010 slot games comparing simple pop-up message (pre-condition) and enhanced pop-up message (post-condition)
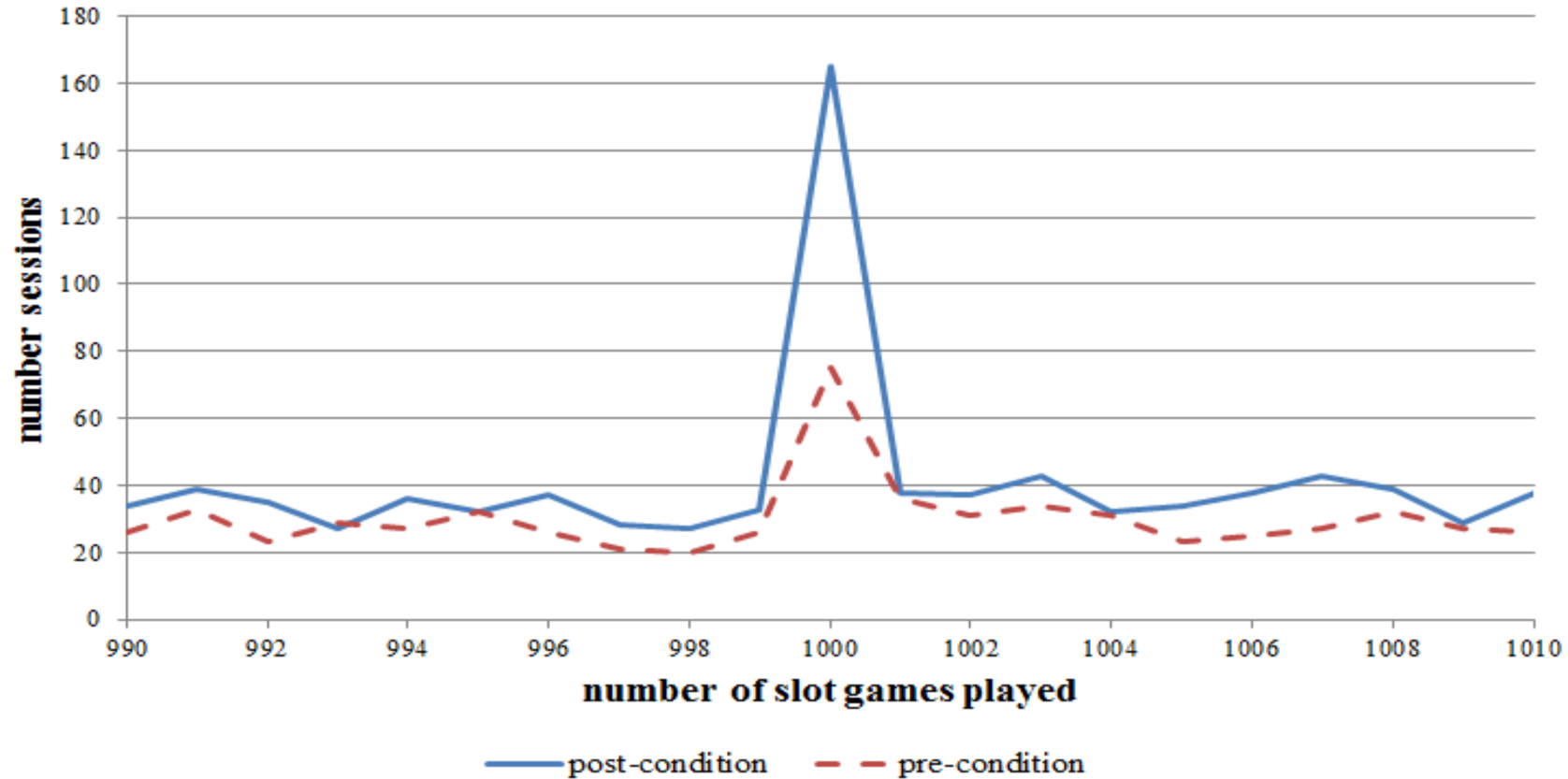
PERSONALISED FEEDBACK STUDY 1
(Auer & Griffiths, 2015)

- Study evaluated the effectiveness of *mentor* (a responsible gambling tool) among 1,015 online gamblers at a European online gambling site

- Compared their behavior with matched controls (n=15,216) on the basis of age, gender, playing duration, and theoretical loss.

The use of personalized behavioral feedback for online gamblers: an empirical study

Michael M. Auer[1]* and Mark D. Griffiths[2]

[1] neccton ltd., Lienz, Austria, [2] Department of Psychology, Nottingham Trent University, Nottingham, UK

Over the last few years, online gambling has become a more common leisure time activity. However, for a small minority, the activity can become problematic. Consequently, the gambling industry has started to acknowledge their role in player protection and harm minimization and some gambling companies have introduced responsible gambling tools as a way of helping players stay in control. The present study evaluated the effectiveness of *mentor* (a responsible gambling tool that provides personalized feedback to players) among 1,015 online gamblers at a European online gambling site, and compared their behavior with matched controls (n = 15,216) on the basis of age, gender, playing duration, and theoretical loss (i.e., the amount of money wagered multiplied by the payout percentage of a specific game played). The results showed that online gamblers receiving personalized feedback spent significantly less time and money gambling compared to controls that did not receive personalized feedback. The results suggest that responsible gambling tools providing personalized feedback may help the clientele of gambling companies gamble more responsibly, and may be of help those who gamble excessively to stay within their personal time and money spending limits.

Keywords: responsible gambling, player tracking, problem gambling, harm minimization, player protection

Introduction

In recent years, online gambling has become a more common leisure time activity. Data from 2010 British Gambling Prevalence Survey reports that 14% of the population gambled on the internet in the past year (Wardle et al., 2011a). According to Griffiths (2003), there are a number of situational and structural characteristics that make online gambling potentially risky for susceptible and

mentor

- The results showed that online gamblers receiving personalized feedback spent significantly less time and money compared to controls.

- The results suggest that responsible gambling tools providing personalized feedback may help the clientele of gambling companies gamble more responsibly

- May be of help those who gamble excessively to stay within their personal time and money spending limits.

SO MUCH FOR THE WHEEL - NOW TO INVENT THE CASINO!

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PERSONALISED FEEDBACK STUDY 2
(Auer & Griffiths, 2016)

- Study evaluated the effectiveness of different types of feedback

- Personal information, normative information and/or a recommendation

- 17,552 *Norsk Tipping* online gamblers randomly distributed to six groups

- Final sample comprised 5,528 online gamblers accessed personalised messages

Personalized Behavioral Feedback for Online Gamblers: A Real World Empirical Study

Michael M. Auer[1,2]* and Mark D. Griffiths[1,2]

[1] neccton Ltd, Lienz, Austria, [2] Psychology, Nottingham Trent University, Nottingham, UK

Responsible gambling tools (e.g., limit-setting tools, pop-up messages, and personalized feedback) have become increasingly popular as a way of facilitating players to gamble in a more responsible manner. However, relatively few studies have evaluated whether such tools actually work. The present study examined whether the use of three types of information (i.e., personalized feedback, normative feedback, and/or a recommendation) could enable players to gamble more responsibly as assessed using three measures of gambling behavior, i.e., theoretical loss (TL), amount of money wagered, and gross gaming revenue (GGR) (i.e., net win/loss). By manipulating the three forms of information, data from six different groups of players were analyzed. The participant sample drawn from the population were those that had played at least one game for money on the *Norsk Tipping* online platform (*Instaspill*) during April 2015. A total of 17,452 players were randomly selected from 69,631 players that fulfilled the selection criteria. Of these, 5,528 players participated in the experiment. Gambling activity among the control group (who received no personalized feedback, normative feedback or no recommendation) was also compared with the other five groups that received information of some kind (personalized feedback, normative feedback and/or a recommendation). Compared to the control group, all groups that received some kind of messaging significantly reduced their gambling behavior as assessed by TL, amount of money wagered, and GGR. The results support the hypothesis that personalized behavioral feedback can enable behavioral change in gambling but that normative feedback does not appear change behavior significantly more than personalized feedback.

Keywords: online gambling, responsible gambling, problem gambling, human–computer interaction, behavioral feedback, persuasive communication

INTRODUCTION

Gambling is a popular activity in many cultures. Surveys have reported that most people gamble but

PERSONALISED FEEDBACK STUDY 2
(Auer & Griffiths, 2016)

A fully balanced experimental design was set up with online players from *Norsk Tipping*

Three conditions

Content of the messages

Personal information about wins/losses last six months, Question: In line with, more or less than you expected

Normative information: Information about the average players loss

Recommendation: Tools and Resources to control your gambling/spending
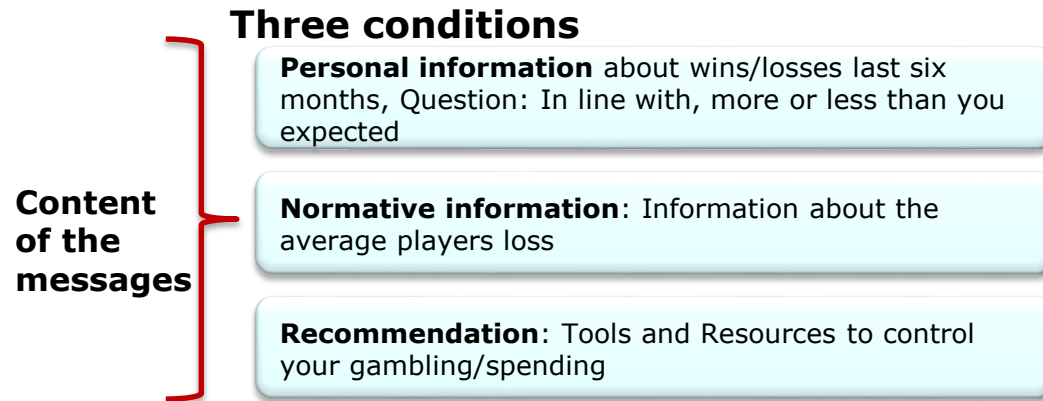
	Personalized information	Recommendation	Normative feedback
Group 1	YES	NO	NO
Group 2	YES	YES	NO
Group 3	YES	YES	YES
Group 4	YES	NO	YES
Group 5	NO	YES	NO
Group 6	NO	NO	NO

THE EFFECTS OF RG MESSAGING

Do the different groups change differently in the week after the message was read?
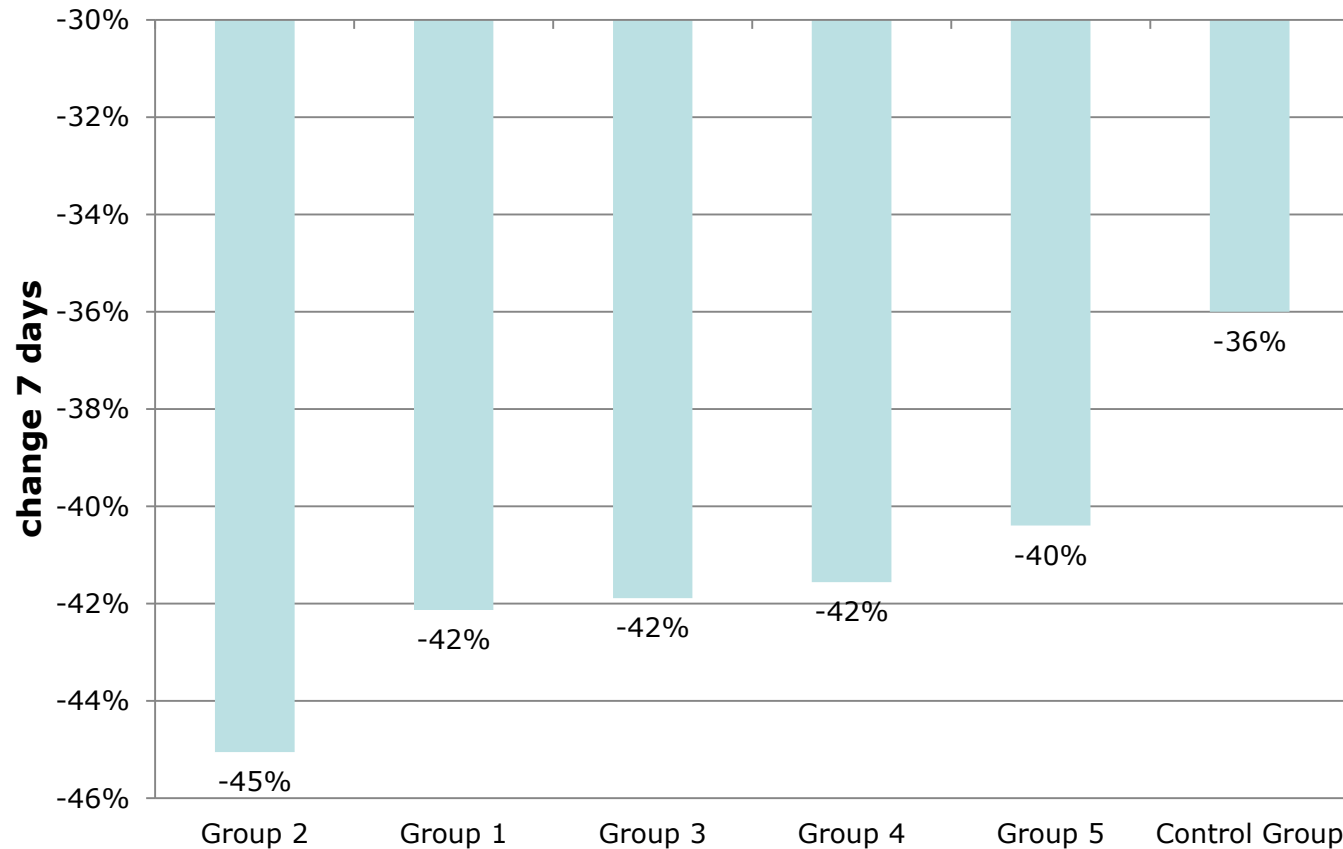
- Group 2's expenditure decreased by 45%
- Group 5's expenditure decreased by 40%
- The control group's expenditure decreased by 36%

SUBJECTIVE VS. OBJECTIVE DATA
(Auer & Griffiths, 2017)

- Players underestimate their losses

- Casino players under-estimate their losses more than lottery players

- Involved, young and recent casino players say they have lost more than expected

- Low involved female scratchcard players say they have lost more than expected

- A group of high spending casino players say they have lost as much as expected

Self-Reported Losses Versus Actual Losses in Online Gambling: An Empirical Study

Michael Auer[1] · Mark D. Griffiths[2]

Abstract Many research findings in the gambling studies field rely on self-report data. A very small body of empirical research also suggests that when using self-report, players report their gambling losses inaccurately. The aim of the present study was to evaluate the differences between objective and subjective gambling spent data by comparing gambler's actual behavioral tracking data with their self-report data over a 1-month period. A total of 17,742 Norwegian online gamblers were asked to participate in an online survey. Of those surveyed, 1335 gamblers answered questions relating to gambling expenditure that could be compared with their actual gambling behavior. The study found that the estimated loss self-reported by gamblers was correlated with the actual objective loss and that players with higher losses tended to have more difficulty estimating their gambling expenditure (i.e., players who spent more money gambling also appeared to have more trouble estimating their expenses accurately). Overall, the findings demonstrate that caution is warranted when using self-report data relating to amount of money spent gambling in any studies that are totally reliant on self-report data.

COGNITIVE DISSONANCE

- Players change if feedback can trigger cognitive dissonance

Cognitive Dissonance, Personalized Feedback, and Online Gambling Behavior: An Exploratory Study Using Objective Tracking Data and Subjective Self-Report

Authors   Authors and affiliations

Michael Auer, Mark D. Griffiths ✉

Abstract

Providing personalized feedback about the amount of money that gamblers have actually spent may—in some cases—result in cognitive dissonance due to the mismatch between what gamblers actually spent and what they thought they had spent. In the present study, the participant sample ($N = 11,829$) was drawn from a Norwegian population that had played at least one game for money in the past six months on the *Norsk Tipping* online gambling website. Players were told that they could retrieve personalized information about the amount of money they had lost over the previous 6-month period. Out of the 11,829 players, 4045 players accessed information about their personal gambling expenditure and were asked whether they thought the amount they lost was (i) more than expected, (ii) about as much as expected, or (iii) less than expected. It was hypothesized that players who claimed that the amount of money lost gambling was more than they had expected were more likely to
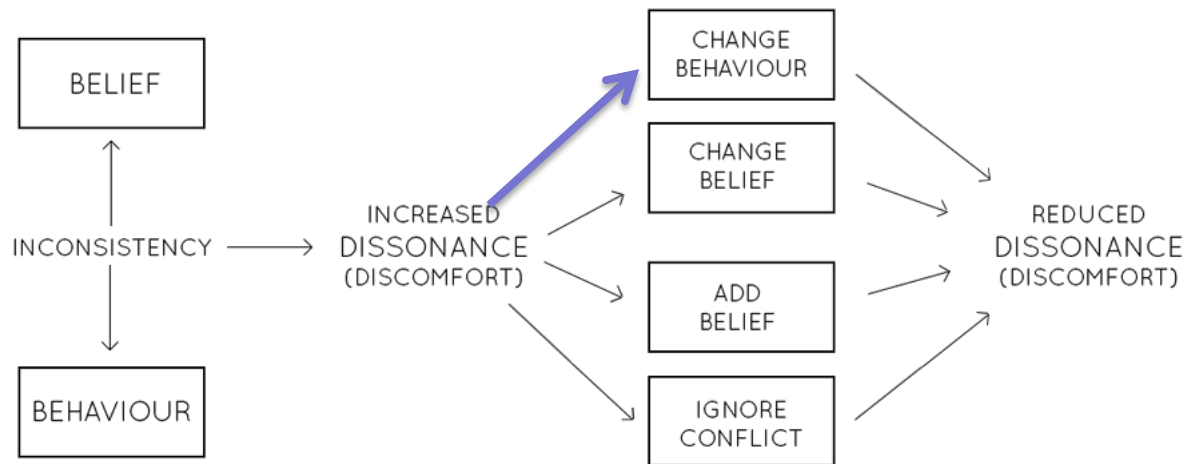
ONLINE BEHAVIOURAL TRACKING FOR PG SCREENING CRITERIA: IMPLICATIONS

- Various members of the online gambling industry have claimed that problem gambling can be identified online.

- If this is true, it has implications for current problem gambling screening instruments.

- A brief analysis of the extent to which each DSM-5 criterion of problem gambling can be identified online shows that only a few behaviours can be identified

DSM-5 CRITERIA FOR GAMBLING DISORDER

- Is preoccupied with gambling (e.g. reliving past experiences, planning next venture, thinking of ways to get money)

- Needs to gamble with increasing amounts of money in order to achieve the desired excitement

- Repeated unsuccessful efforts to control, cut back, or stop gambling

- Is restless or irritable when trying to cut down or stop gambling

- Gambles as a way of escaping from problems or of relieving a dysphoric mood (e.g. helplessness, guilt, anxiety, depression

- After losing money gambling, often returns another day to get even ("chasing" one's losses)

- Lies to family members, therapist, or others to conceal extent of involvement with gambling

- Has jeopardised or lost a significant relationship, job, or educational or career opportunity because of gambling

- Relies on others to provide money to relieve a desperate financial situation caused by gambling

CAN BIG DATA ONLINE TRACKING
BE IDENTIFIED USING DSM-5 CRITERIA?

- Salience/Preoccupation   (good possibility)

- Tolerance   (possibly)

- Relapse   (possibly)

- Withdrawal   (unlikely)

- Escape from reality   (unlikely)

- Chasing losses   (definitely)

- Conceal Involvement   (unlikely)

- Unsociable Behaviour   (unlikely)

- Ruin a Relationship/Opportunity   (unlikely)

- Bail-out   (slight possibility)

PROBLEM GAMBLING BEHAVIOUR ONLINE USING BIG DATA

- Chasing losses

- Total preoccupation with gambling

- Increase of gambling behaviour (time & money) over time

- Playing a variety of stakes

- Playing a variety of games

- Player 'reload' within gambling session

- Not collecting winnings

- Frequent payment method changes

- [Verbal aggression in chat rooms]

- [Constant complaints to customer services]

- Most importantly it is *change in usual behaviour*

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search ID: grin879

"I bet you £10 there's a gambling advert on next."
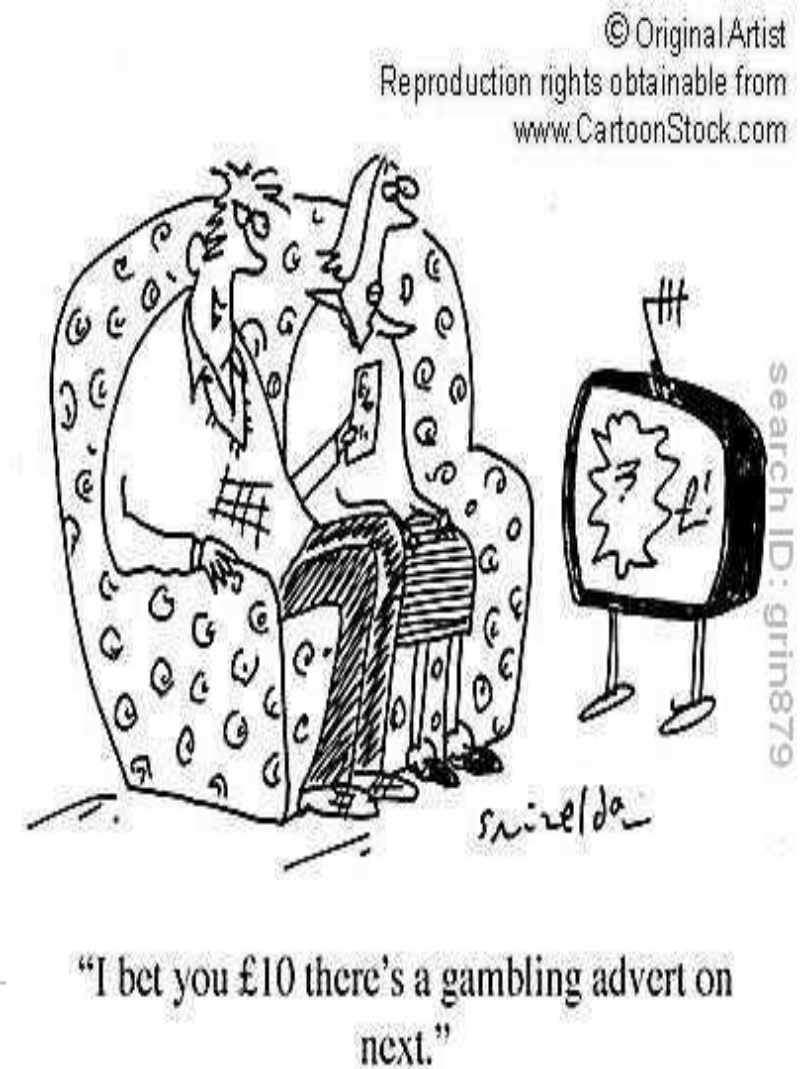
SELF-EXCLUDERS AS A PROXY FOR PG
(Griffiths & Auer, 2016)

➢ Temporary self-exclusions are about RG not PG

➢ Permanent self-excluders are not PGs

➢ PGs are not permanent self-excluders

➢ Players exclude for various reasons

Griffiths and Auer (2011; 2015) note that behavioural tracking data:

- Always come from unrepresentative samples (i.e., the players that use one particular internet gambling site

- Does not tell us anything about a gambler's overall gambling (as gamblers are rarely loyal to one site

- Does not account for the fact that more than one person can use a particular account
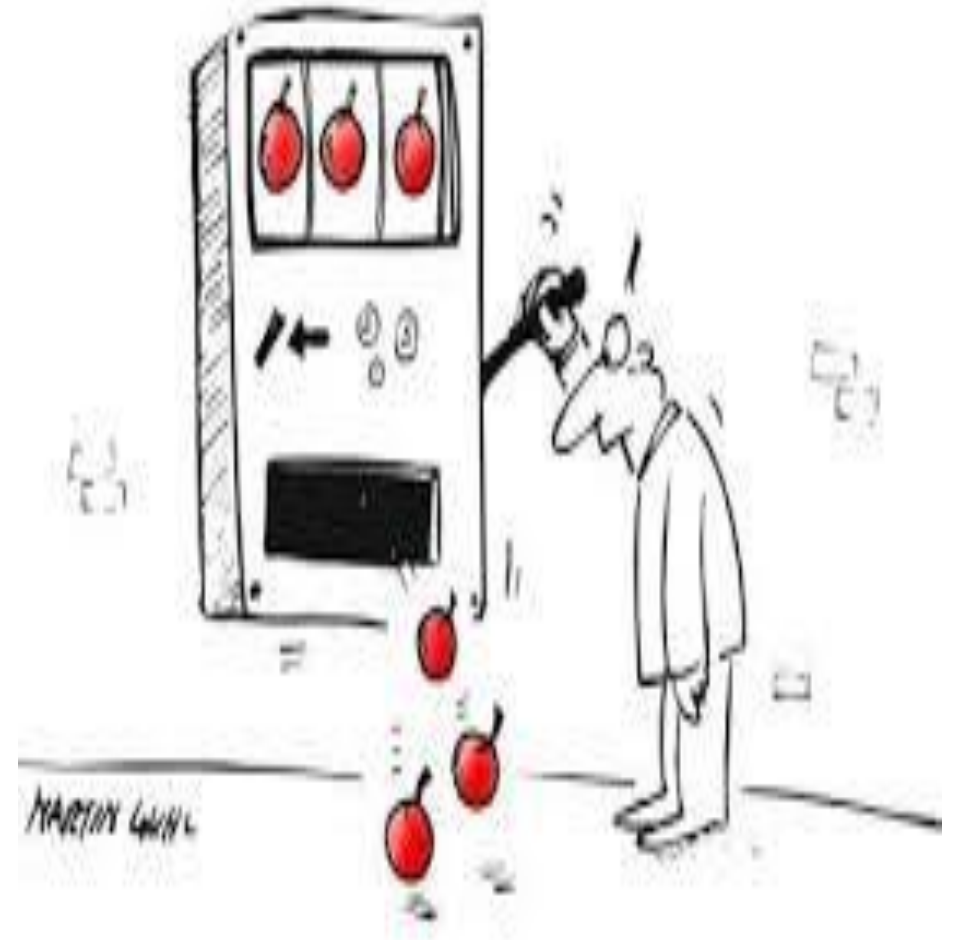
- *"Tell us nothing"* about _why_ people gamble or develop problem

- Cannot be used for comparing online and offline gambling as data are only collected on one group of people (i.e., online gamblers)

- Are less likely to provide insights into the relationships between gambling and other co-morbid behaviours

- Cannot examine problem gambling using current diagnostic criteria.
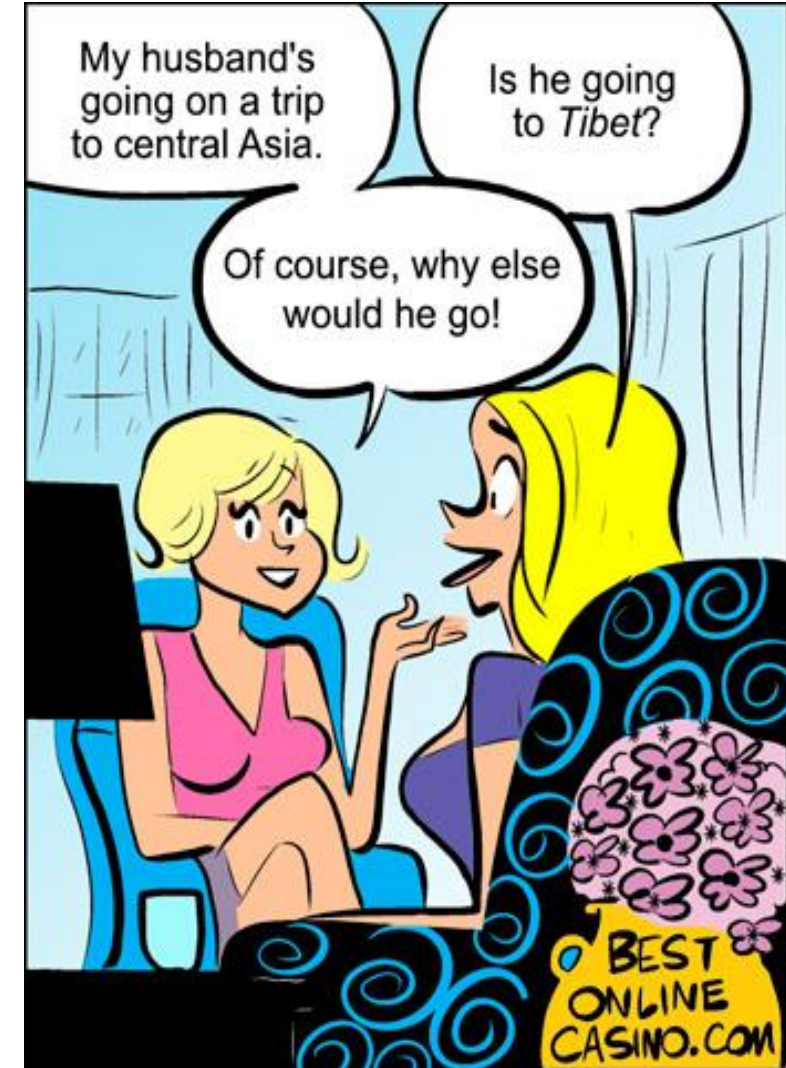
FACIAL RECOGNITION

Facial recognition software used to bar problem gamblers

🕐 Jun 4, 2018 | Stephen Mayhew

CATEGORIES   Biometrics News | Facial Recognition | Surveillance

New Zealand casinos are expanding the use of facial recognition technology to prevent self-identitfied problem gamblers from entering certain venues, reports Gaming Today.

The system monitors people entering casinos and checks their face against a voluntary photo database of problem gamblers who have requested to be barred from specific venues. Staff are alerted to check the person's ID when the system finds a match.

According to Gaming Today 15 venues are currently using the facial recognition technology and six others are scheduled to deploy the system soon. The report says the system costs about the same as a new gaming machine, approximately $13,500 to $20,000 U.S.

Previously reported, Japan's government is looking at implementing biometric identification technology for locals wanting to enter proposed casino resorts.


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News » Live Casinos » New AI Identifies Problem Gamblers Through Facial Recognition Technology

New AI Identifies Problem Gamblers Through Facial Recognition Technology

JANUARY 23, 2018 BY KATIE BARLOWE

Casino security may have just moved into a brave new world, or a creepy Orwellian nightmare, depending on your point of view.
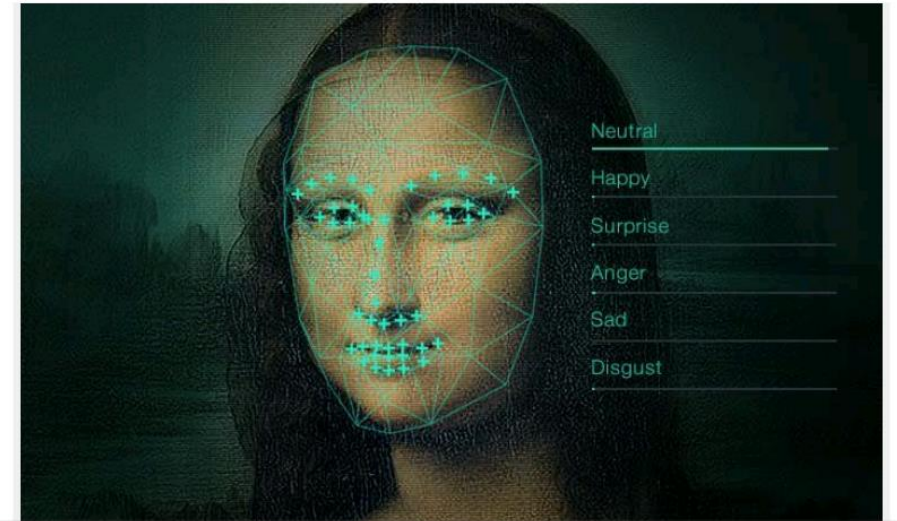
THANK YOU FOR LISTENING!

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