

# Früherkennung problematischen Spielens

Glücksspielsymposium

17.03.2021



# neccton



- Österreichisches Unternehmen
- Spezialisiert auf Machine Learning und Big Data
- Software „*mentor*“ wurde 2011 entwickelt
- „*mentor*“ ist mittlerweile live auf beinahe 100 Internetseiten in den meisten europäischen Ländern und Kanada



# References (selection)



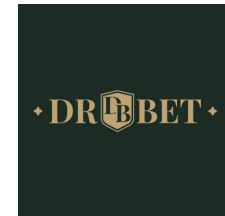
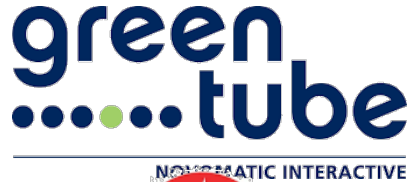
NEDERLANDSE  
LOTERIJ



GAUSELMANN  
*Die SPIELMACHER*



NAPOLEON  
SPORTS & CASINO



Atlantic Lottery



THE MILL  
ADVENTURE



# Wissenschaftliche Arbeit

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- ✓ Auer, M. & Griffiths, M. D. (2016). Self-reported losses versus actual losses in online gambling: An empirical study. *Journal of Gambling Studies*, 33, 795-806
- ✓ Auer, M. & Griffiths, M. D. (2016). Personalized behavioral feedback for online gamblers: A real world empirical study. *Frontiers in Psychology*, 7, 1875.
- ✓ Auer, M. & Griffiths, M. D. (2016). Should voluntary “self exclusion” by gamblers be used as a proxy measure for problem gambling? *Addiction Medicine & Therapy*, 2016, 31-33.
- ✓ Auer, M. & Griffiths, M. D. (2017). Cognitive Dissonance, Personalized Feedback, and Online Gambling Behavior: An Exploratory Study Using Objective Tracking Data and Subjective Self-Report. *International Journal of Mental Health and Addiction*, DOI 10.1007/s11469-017-9808-1
- ✓ Auer, M. Reiestad, S. H., Griffiths, M. D. (2018). Global Limit Setting as a Responsible Gambling Tool: What Do Players Think? *International Journal of Mental Health and Addiction*, DOI 10.1007/s11469-018-9892-x
- ✓ Auer, M., Hopfgartner, N., & Griffiths, M. D. (2019). An Empirical Study of the Effect of Voluntary Limit-Setting on Gamblers’ Loyalty Using Behavioural Tracking Data. *International Journal of Mental Health and Addiction*, 1-12.
- ✓ Auer, M., Malischig, D., & Griffiths, M. D. (2020). Gambling before and during the COVID-19 pandemic among European regular sports bettors: an empirical study using behavioral tracking data. *International Journal of Mental Health and Addiction*, 1-8.
- ✓ Ukhov, I., Bjurgert, J., Auer, M., & Griffiths, M. D. (2020). Online problem gambling: a comparison of casino players and sports bettors via predictive modeling using behavioral tracking data. *Journal of Gambling Studies*, 1-21.
- ✓ Auer, M., & Griffiths, M. D. (2020). The use of personalized messages on wagering behavior of Swedish online gamblers: An empirical study. *Computers in Human Behavior*, 110, 106402.
- ✓ Auer, M., & Griffiths, M. D. (2021). Gambling Before and During the COVID-19 Pandemic Among Online Casino Gamblers: An Empirical Study Using Behavioral Tracking Data. *International Journal of Mental Health and Addiction*, 1-11.



# RG and Retention


## First and only publication studying limits and loyalty

International Journal of Mental Health and Addiction  
<https://doi.org/10.1007/s11469-019-00084-3>

ORIGINAL ARTICLE

### An Empirical Study of the Effect of Voluntary Limit-Setting on Gamblers' Loyalty Using Behavioural Tracking Data



Michael Auer<sup>1</sup> • Niklas Hopfgartner<sup>1</sup> • Mark D. Griffiths<sup>2</sup> 

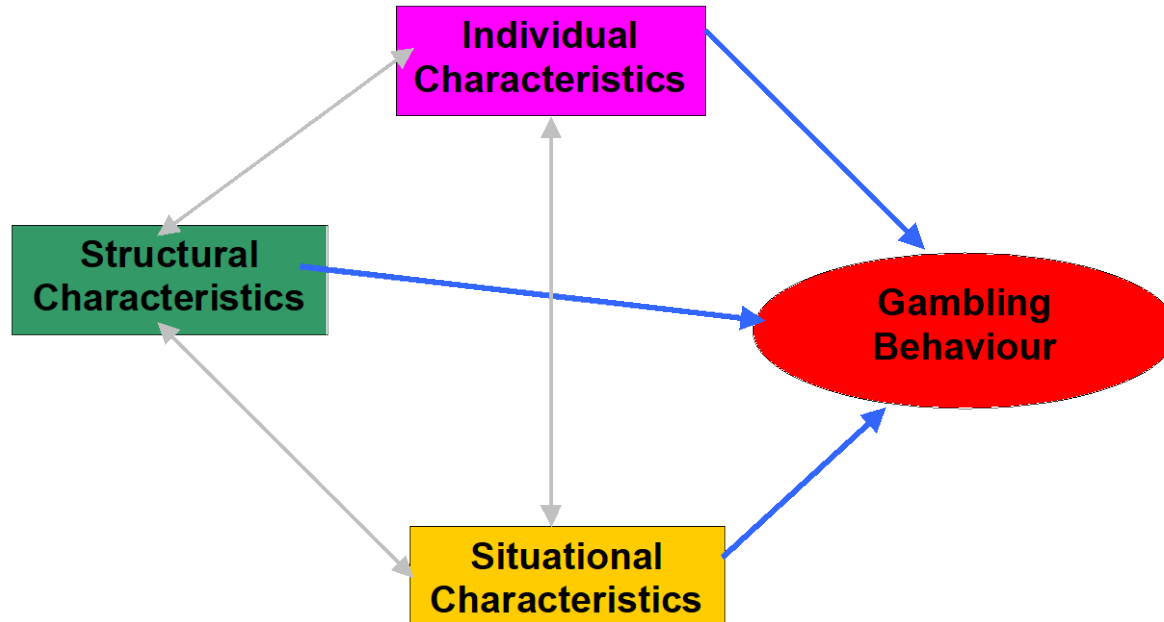
Published online: 26 April 2019  
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#### Abstract

Online gambling has become increasingly popular over the past decade as has research using behavioural tracking (player account) data. To date, there is no study that has empirically investigated the effects of responsible gambling tools on loyalty. In the present study, the effect of voluntary limit-setting on player loyalty was evaluated over time using tracking data provided by an online gambling operator. More specifically, the authors were given access



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



## What *can* we actually detect (DSM-V Criteria)?

No	Item	Tracking
1	Is preoccupied with gambling (e.g. reliving past experiences, planning next venture, thinking of ways to get money) (Salience)	YES
2	Needs to gamble with increasing amounts of money in order to achieve the desired excitement (Tolerance/Mood modification)	YES
3	Repeated unsuccessful efforts to control, cut back, or stop gambling (Relapse)	MAYBE
4	Is restless or irritable when trying to cut down or stop gambling (Withdrawal)	NO
5	Gambles as a way of escaping from problems or of relieving a dysphoric mood (e.g. helplessness, guilt, anxiety, depression (Mood modification)	NO
6	After losing money gambling, often returns another day to get even ("chasing" one's losses) (Chasing losses)	YES
7	Lies to family members, therapist, or others to conceal extent of involvement with gambling (Conflict)	NO
8	Has jeopardised or lost a significant relationship, job, or educational or career opportunity because of gambling (Conflict)	NO
9	Relies on others to provide money to relieve a desperate financial situation caused by gambling (Bail out)	MAYBE

Out of nine items three are detectable and two maybe. The majority of items are related to cognitive aspects and are beyond the possibilities of player tracking!

# Behavioural Markers

- Within Session deposits
- Cancelled Withdrawals
- Failed Deposits
- Various payment methods
- Playing a variety of stakes
- Increased stakes after losses
- ....
- Limit Setting behaviour
- Summary Statement Visits
- RG Site Visits
- Play Breaks
- Self-Assessment accuracy





# Detection & Interaction



# Player Self-Assessment

Studies have shown that players underestimate their losses

**Table 4** Distribution of the normalized bias (bias divided by average GGR) for each game type preferences category among players (n = 1335)

	Median	<i>p</i> value (%)
Lottery	-0.16	63
Casino	-0.27	2
Scratchcards	-0.01	8
Sports betting	-0.20	61
VLTs	-0.16	90

Springer

J Gamb Stud (2017) 33:795–806  
DOI 10.1007/s10899-016-9648-0

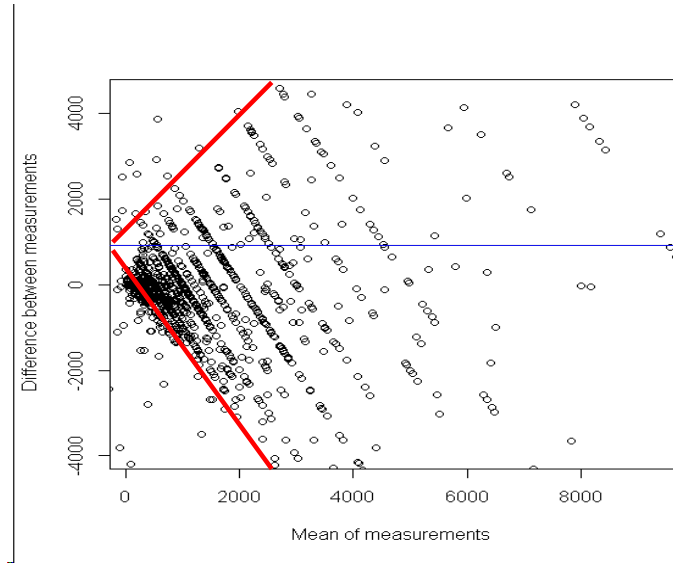


ORIGINAL PAPER

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

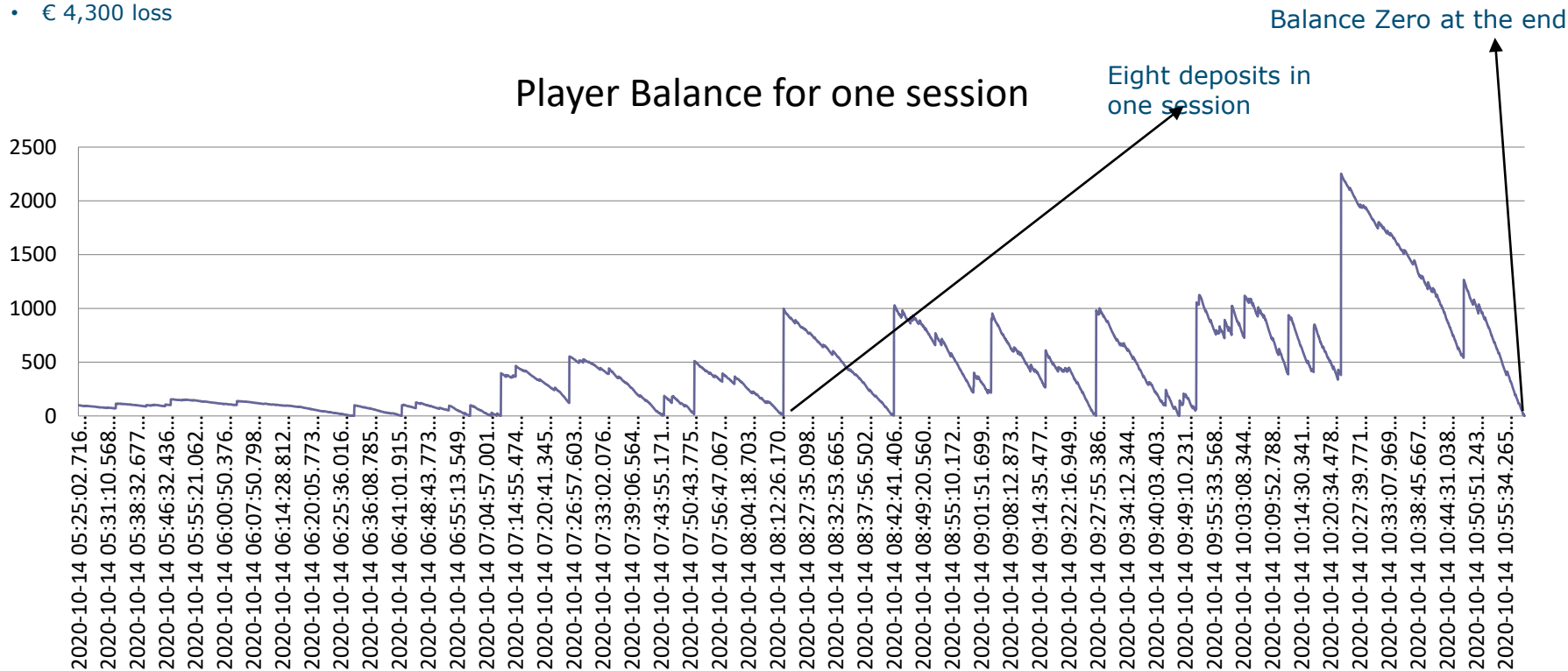
Michael Auer<sup>1</sup> · Mark D. Griffiths<sup>2</sup>

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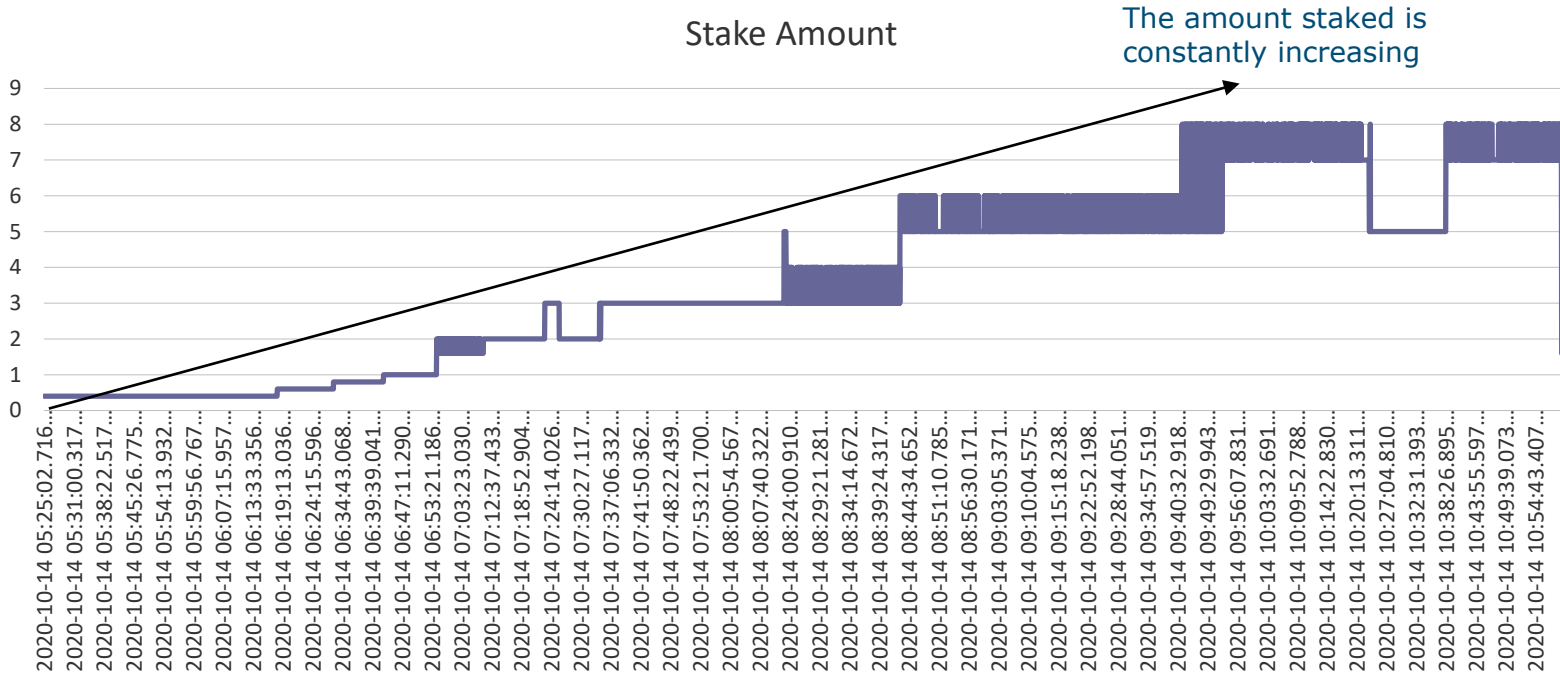


- 6,000 games
- € 4,200 deposited
- € 4,300 loss

# Chasing Losses Example



# Stake amount per spin for one session



# Concrete player interaction example

The screenshot displays a player profile interface. At the top left, there is a yellow circle with the text "LOW". To its right is a rectangular box. In the top right corner, there are two buttons: "INFO CENTER" and "ADMIN TOOL". Below these are several fields: "AGE: 32 yo", "GENDER: Male", "LAST ONLINE: 25.12.2020", "REGISTRATION DATE: 05.07.2020", and "RISK SCORE: Low Risk". Below these fields are "Brand ID" and "Country" (with a long box below them), and "Language: English". A navigation bar contains tabs: "Player Information", "Responsible Gaming Information", "Player Tracking Features", "Risk Profile", "Self Assessments", "Live Info", "Lifetime Values", and "Incidents (0)".

The "PLAY BREAKS" section contains a table with the following data:

Event ID	Create Date	Start	End	Duration	Initiator	Area
PLAYBREAK-98-5662323	23.11.2020   01:00	23.11.2020   19:01	-	NaNs	OPERATOR	

Below the table is a summary bar: "1 total".

The "MESSAGE" section contains a table with the following data:

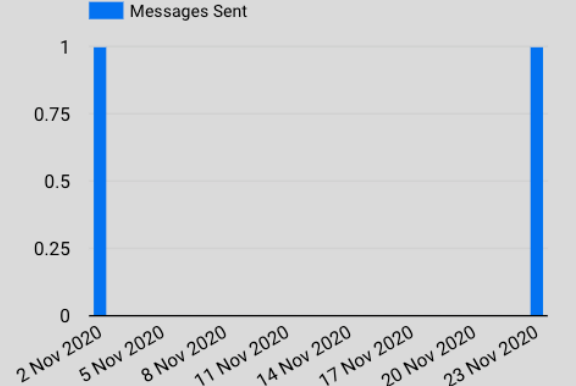
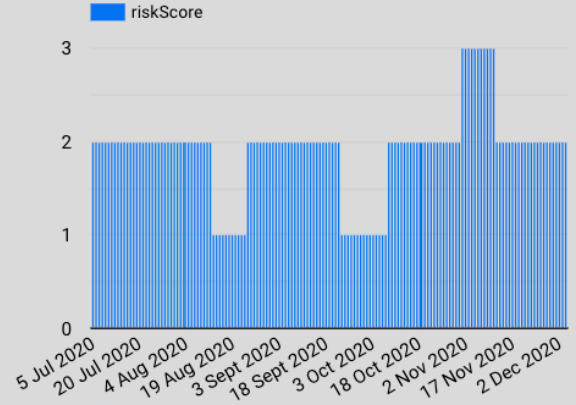
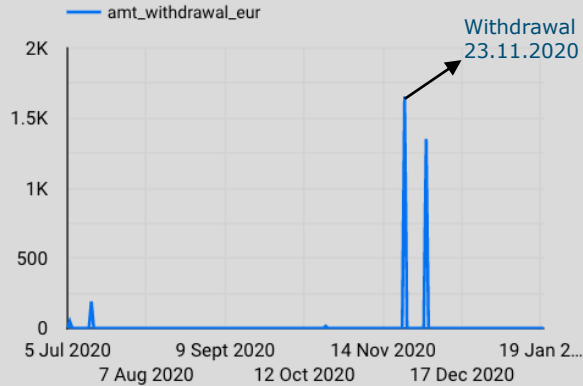
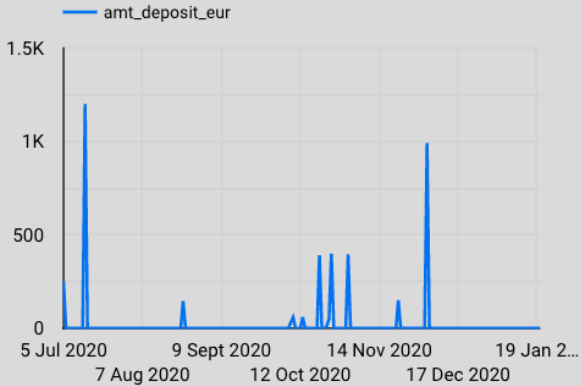
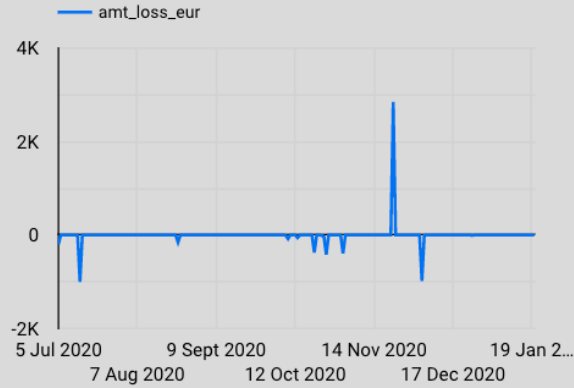
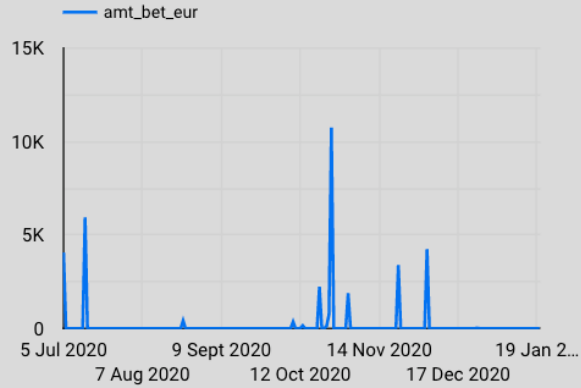
Message Code	Create Date	Read State	Read Date	Delete Date
WINNING_STREAK	23.11.2020   08:03		23.11.2020   12:51	-
DEPOSIT_LIMIT	02.11.2020   08:11		27.11.2020   07:39	-

Below the table is a summary bar: "2 total".

An arrow points from the text "Winning Streak Message" to the "WINNING\_STREAK" message row.

# Player Time Line for individual player IDs

customerIdHash  
 Equals



Lifetime Values

Incidents (1)

returns from play break

PLAY BREAKS

Event ID	Create Date	Start	End	Duration	Initiator	Area
1252828	25.07.2020   02:00	26.07.2020   00:17	21.01.2021   23:17	180d 0h 0m 0s		

1 total

LIMIT CHANGES

MESSAGE

ALERTS

Alert by desposit frequency triggerd

Alert Key	Create Date
DEPOSIT_FREQUENCY_DAY	22.01.2021   20:39

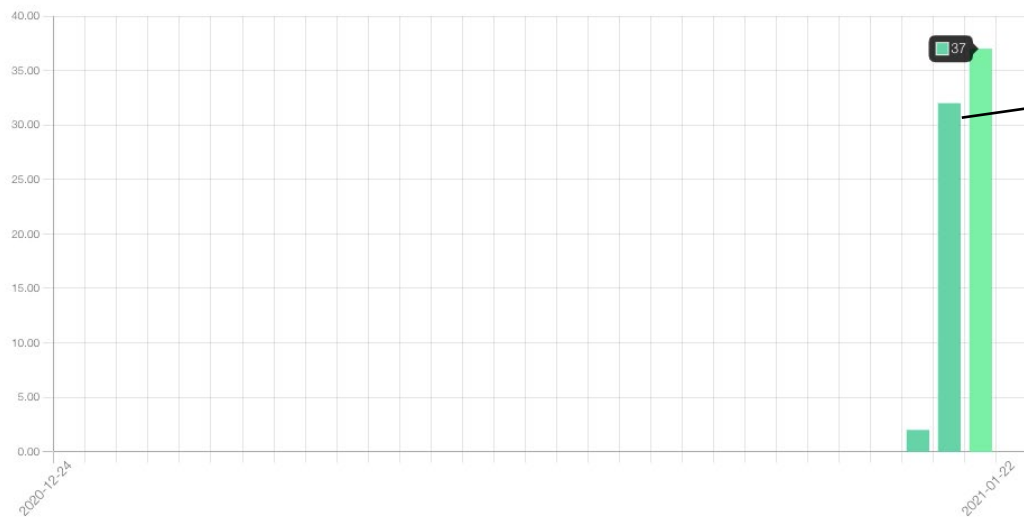
1 total

## Tendencias

No se han detectado aumentos significativos en tu conducta de juego durante las últimas cuatro semanas.



## Número de ingresos

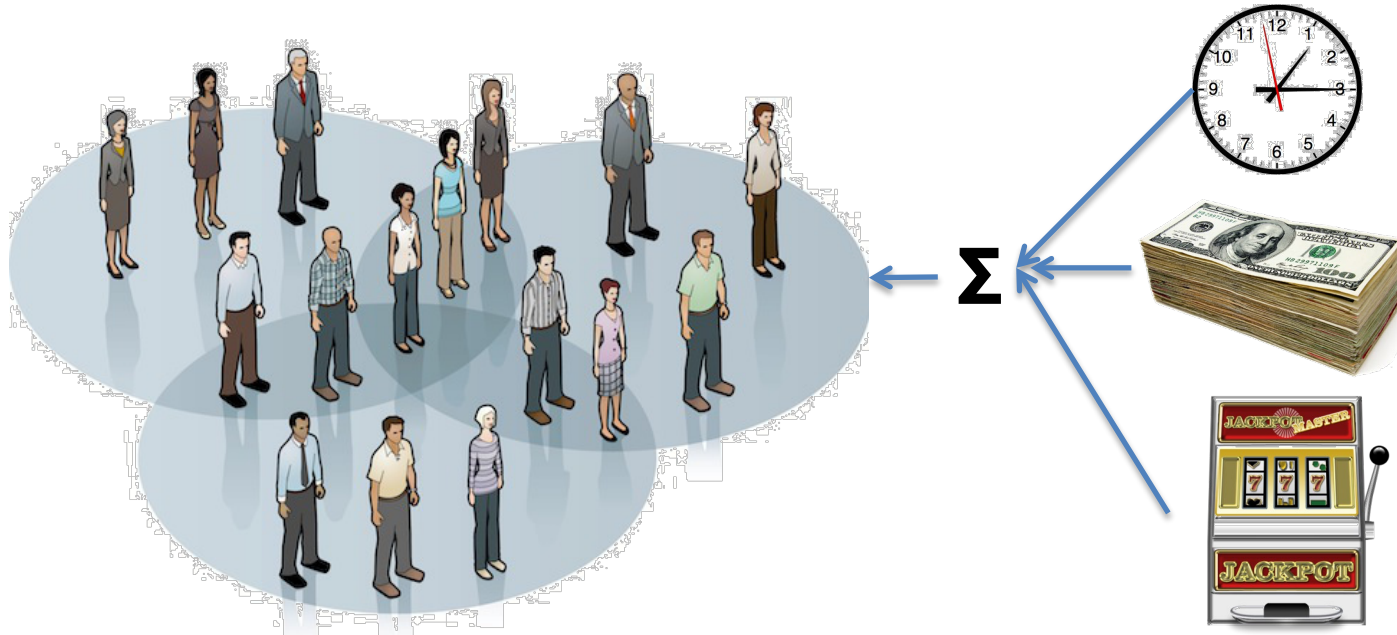


Extreme number of deposits



# One size does not fit all

Escapist Gambler, Binge Gambler,....



# How feedback?

- The extended parallel process model describes a way of communication



## Self - Efficacy

- Belief in one's capabilities to achieve a goal or an outcome
- Having capabilities to organize and execute the courses of action required to produce given attainments
- Is having the belief that students have skills that they can rely on to help them navigate life and reach their goals.
- Refers to a judgment a student makes about his/her ability to accomplish a specific future task

Response efficacy: The action that is given to solve a problem will work. Also it gives reasoning as to why this solution will work.

Example: Eating healthier can reduce your risk of heart disease by X

# Vielen Dank



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