

WHAT DO GAMBLERS THINK OF RESPONSIBLE GAMBLING TOOLS?



Mark Griffiths

**Mark Griffiths
Andrew Harris
& Michael Auer**

The promotion of responsible gambling (RG) and the prevention of problem gambling have become major topics in the gambling studies field. This has led to the introduction of many RG and harm-minimisation initiatives. As gambling products become more technologically sophisticated, the same technological innovation is starting to be used to facilitate the development of harm-minimisation tools to assist gamblers in maintaining self-control and make rational and controlled gambling-related decisions.

The Global Online Gambler Survey (International Gaming Research Unit, 2007) conducted for eCOGRA (eCommerce and Online Gaming Regulation and Assurance) collected data from 10,865 participants, from 96 countries, who reported that they had gambled at Internet casino sites, Internet poker sites, or both within the three months prior to the study. In relation to social responsibility, online gamblers were specifically asked about five particular features (i.e., self-set spending limits, self-set time limits, self-exclusion, provision of regular financial statements, and self-assessment problem gambling tests). Although no single feature stood out as critically important, 51-75% of players (across all five social responsibility features) stated that they would consider some responsible gambling elements at least 'quite useful'. The most popular option was receiving regular financial statements (i.e., objective feedback about all wins and losses) with 75% considering this option to be at least quite useful and the least popular feature was self-set time limit with 51% reporting this as at least quite useful. Those players who were younger, female, gambled out of boredom, and reported losing more money, were significantly more likely to consider responsible gambling features to be useful. ▶

Griffiths, Wood and Parke (2009) examined players' attitudes



and behaviour toward using the behavioural tracking tool PlayScan. The tool provides players with information concerning various social responsibility control tools (e.g., personal gaming budgets, self-diagnostic tests of gambling habits, self-exclusion options, etc.). Out of 2,348 participants (all customers of the Swedish gaming operator Svenska Spel) who completed the survey, just over a quarter of players (26%) had used the voluntary system. Over half of PlayScan users said it was useful (52%) versus 19% who said it was not. Many features were seen as useful by gamblers, including limit setting (70%), viewing their gambling profile (49%), self-exclusion facilities (42%), self-diagnostic problem gambling tests (46%), information and support for gambling issues (40%), and gambling profile predictions (36%).

Providing Information For Gambling More Responsibly

Some gambling companies have started to utilise responsible gambling tools to support their clientele gambling more responsibly. Gamblers now have access and/or are given general advice concerning healthy and responsible gambling. However, evaluations of the effectiveness of providing gamblers with such information have been mixed. For instance, some research has supported the use of information in helping individuals gamble more responsibly (e.g., Dixon, 2000; Ladouceur, 2003), whereas other studies have reported no significant association between providing information and gambling responsibly (e.g., Hing 2003; Focal Research, 2004; Williams & Connolly, 2006).

However, research has also shown that the way information is presented can significantly influence behaviour and thoughts. Several experimental studies have investigated the effects of

interactive versus static pop-up messages during gambling sessions. Static messages do not appear to be particularly effective, whereas interactive pop-up messages and animated information have been shown to change irrational belief patterns and subsequent gambling behaviour (e.g., Cloutier, Ladouceur, & Sevigny, 2006; Ladouceur & Sevigny, 2003; Schellink & Schrans, 2002; Monaghan & Blaszczynski, 2007 & 2010a; Monaghan, Blaszczynski & Nower, 2009). Monaghan et al. (2010a) found that pop-up messages on electronic gambling machines containing self-appraisal messages had significant effects on self-reported thoughts and behaviour during experimental sessions.

A study by Munoz, Chebat and Borges (2013) assessed the impact of graphic warning messages versus text-only messages, in terms of their impact on gamblers' levels of processing of the message, cognitive appraisal, fear, and attitudes. The graphic warning message was a picture of an electronic gaming machine (EGM) being depicted as a monster eating a gambler. The image also contained smaller circular graphics within the EGM that depicted the negative (financial or family) outcomes that gamblers might suffer from gambling. Results indicated that the graphic message enhanced cognitive appraisal and fear, as well as having positive effects on the depth of information processing.

The Use of Pop-Up Messaging In Real World Settings

More recently, a number of studies have been carried out in real world settings using real gamblers in real time. For instance, Auer, Malischnig and Griffiths (2014) investigated the effect of a pop-up message that appeared after 1,000 consecutive online slot machine games had been played by individuals during a single

gambling session. The study analysed 400,000 gambling sessions (200,000 sessions before the pop-up had been introduced and 200,000 after the pop-up had been introduced). The study found that the pop-up message had a limited effect on a small percentage of players. Although the study reported nine times as many gamblers stopped after 1000 consecutive plays compared to those gamblers before the introduction of the pop-up message, the number of gamblers that actually stopped after viewing the pop-up message was less than 1%.

In a follow-up study, Auer and Griffiths (2015a) investigated the effects of normative and self-appraisal feedback in a slot machine pop-up message that appeared after playing 1,000 consecutive games on an online slot machine within a single session compared to a simple (non-enhanced) pop-up message. The study compared 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%). As in the previous study by Auer et al. (2014), the findings suggested that pop-up messages influenced a small number of gamblers to cease long playing sessions but that enhanced messages are slightly more effective in helping gamblers to stop playing within-session. To date, these are the only two studies (i.e., Auer & Griffiths, 2015a; Auer, Malischnig and Griffiths, 2014) to examine the impact of pop-up messaging on actual gamblers in a real world online gambling environment.

Personalised Feedback Using Behavioural Tracking Systems

Personalised feedback which informs players about their past behaviour and incorporates a longer time period than just the current session has begun to be empirically studied by analysing player data from behavioural tracking tools (PlayScan and mentor). Auer and Griffiths (2015b) studied the behaviour of 1,015 online gamblers in connection with their voluntary use of a responsible gaming behavioural tracking tool (mentor) compared with 15,216 matched control group gamblers (that had not used the behavioural tracking tool) 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 [Auer & Griffiths, 2014]). The results showed that online gamblers receiving personalised feedback spent significantly less time and money gambling compared to matched controls that did not receive personalised feedback. However, as the gamblers who used the behavioural tracking tool had volunteered to use it and had not been randomly assigned, this meant the effect might not only be due to the feedback but also to other factors not controllable by the researchers (for instance, those signing up to use the tool may have been more responsible gamblers to begin with).

Forsström, Hesser and Carlbring (2015) carried out a study on the use of PlayScan. The data from a total of 9,528 players who voluntarily used the system were analysed. They found that the initial usage of the tool was high, but that repeated usage was low. Two groups of users (i.e., self-testers and multi-function users) utilised the tool to a greater extent. However, the study did not analyse changes in behaviour as a consequence of using the

tool. Wood and Wohl (2015) obtained data from 779 Svenska Spel online players who received behavioural feedback using PlayScan. Feedback took the form of a colour-coded risk rating (green=no issues, yellow=at-risk, red=problematic) determined by a proprietary algorithm. Additionally, gambling expenditure data (amounts deposited and wagered) were gathered for the week in which players enrolled to use PlayScan, the subsequent week, and 24 weeks later. Results showed that yellow (i.e. at-risk) players who used the tool significantly reduced the amounts of money deposited and wagered compared to players who did not use the tool – an effect observed the week following enrolment as well as 24 weeks later. The results suggest that informing at-risk players who have opted to receive feedback about their gambling appears to have a positive impact in reducing subsequent expenditure.

Conclusions

Studies carried out to date appear to support the notion that harm-minimisation tools should be viewed as prevention measures for those who already gamble safely, or are at risk of developing a problem, rather than an intervention for those already exhibiting problem gambling behaviour. Whilst the limitations of laboratory-based experimental work are recognised, this does not expel their relevance in the research field of gambling harm-minimisation. Indeed, while ecological validity is largely lacking in such studies, they offer a level of experimental control often not afforded by real world research, allowing the impact of specific game manipulations and tools to be tested for both their positive and negative influences on behaviour and cognition. It is also recommended that RG tools should demonstrate positive efficacy before being widely implemented in real-world settings, which may prove costly both financially and for the gamblers themselves if tools are capable of producing unintended effects. To date, RG tools have taken on a variety of forms. However, while harm-minimisation as a research field within psychology is on the rise in terms of volume and quality of empirical research, the evaluation of such tools remains in its infancy. **CGI**

References

- Ajzen, I. (1985). From intentions to action: a theory of planned behaviour. In J. Kuhl & J. Beckman (Eds.), *Action Control: from Cognitions to Behaviours*, (pp. 11-39). Springer: New York.
- Auer, M. & Griffiths M. D (2013). Voluntary limit setting and player choice in most intense online gamblers: An empirical study of gambling behaviour. *Journal of Gambling Studies*, 29, 647-660.
- Auer, M. & Griffiths, M. D. (2014). An empirical investigation of theoretical loss and gambling intensity. *Journal of Gambling Studies*, 30, 879-887.
- Auer, M. & Griffiths, M.D. (2015a). Testing normative and self-appraisal feedback in an online slot-machine pop-up message in a real-world setting. *Frontiers in Psychology*, 6, 339. doi: 10.3389/fpsyg.2015.00339.
- Auer, M., Griffiths, M.D. (2015b). The use of personalized behavioural feedback for online gamblers: an empirical study. *Frontiers in Psychology*, 6, 1406. doi: 10.3389/fpsyg.2015.01406
- Auer, M., Malischnig, D., & Griffiths M. D. (2014). Is 'pop-up' messaging in online slot machine gambling effective as a responsible gambling strategy? An empirical re-search note. *Journal of Gambling Issues*, 29, 1-10. ▶
- Auer, M., Schneeberger, A., & Griffiths, M. D. (2012). Theoretical loss

and gambling intensity: A simulation study. *Gaming Law Review and Economics*, 16, 269-273.

Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology*, 52, 1-26.

Braverman, J., LaPlante, D. A., Nelson, S. E., & Shaffer, H. J. (2013). Using cross-game behavioural markers for early identification of high-risk Internet gamblers. *Psychology of Addictive Behaviours*, 27, 868-877.

Braverman, J., & Shaffer, H. J. (2012). How do gamblers start gambling: Identifying behavioural markers of high-risk Internet gambling. *European Journal of Public Health*, 22, 273-278.

Broda, A., LaPlante, D. A., Nelson, S. E., LaBrie, R. A., Bosworth, L. B. & Shaffer, H. J. (2008). Virtual harm reduction efforts for Internet gambling: effects of deposit limits on actual Internet sports gambling behaviour. *Harm Reduction Journal*, 5, 27.

Brunelle, N., Cousineau, M.-M., Dufour, M., Gendron, A., Leclerc, D. (2009, March). A look at the contextual elements surrounding internet gambling among adolescents. Paper presented at the 8th Annual Conference of Alberta Gaming Research Institute. Banff Center, Alberta.

Buttussi, F., Chittaro, L., Nadalutti, D. (2006). Bringing mobile guides and fitness activities together: a solution based on an embodied virtual trainer. *Proceedings of MOBILE HCI 2006: 8th International Conference on Human-Computer Interaction with Mobile Devices and Services* (pp. 29-36). New York: ACM Press.

Celio, M.A., Lisman, S.A. (2014). Examining the efficacy of a personalized normative feedback intervention to reduce college student gambling. *Journal of American College Health*, 62, 154-164.

Cho, J. H., Lee, H. C., Lim, D. J., Kwon, H. S., & Yoon, K.H. (2009). Mobile communication using a mobile phone with glucometer for glucose control in Type 2 patients with diabetes: as effective as an internet based glucose monitoring system. *Journal of Telemedicine and Telecare*, 15, 77-82

Cloutier, M., Ladouceur, R., & Sevigny, S. (2006). Responsible gambling tools: popup messages and pauses on video lottery terminals. *Journal of Psychology: Interdisciplinary and Applied*, 140, 434-438.

Cohn, A. M., Hunter-Reel, D., Hagman, B. T., & Mitchell, J. (2011). Promoting behaviour change from alcohol use through mobile technology: The future of ecological momentary assessment. *Alcoholism: Clinical & Experimental Research*, 35, 2209-2215.

Colkesen, E.B., Laan, E.K., Tijssen, J.G., Kraaijenhagen, R.A., Van Kalken, C.K., Peters, R.J. (2013). Effect of a web-based health risk assessment with tailored feedback on lifestyle among voluntary participating employees: A long-term follow-up study. *Journal of Community Medicine and Health Education*, 3: 204. doi: 10.4172/2161-0711.1000204

Dixon, M. (2000). Manipulating the illusion of control: variations in gambling as a function of perceived control over chance outcomes. *Psychological Record*, 50, 705-720.

Dragicevic, S., Tsogas, S. B., & Kudic, A. (2011). Analysis of casino online gambling data in relation to behavioural risk markers for high-risk gambling and player protection. *International Gambling Studies*, 11, 377-391.

Gray, H. M., LaPlante, D. A., & Schaffer, H. J. (2012). Behavioural characteristics of Internet gamblers who trigger corporate responsible gambling interventions. *Psychology of Addictive Behaviours*. DOI:10.1037/a0028545.

Farmer, A., Gibson, O., Hayton, P., Bryden, K., Dudley, C., Neil, A., & Tarassenko L. (2005). A real-time, mobile phone-based telemedicine system to support young adults with type 1 diabetes. *Informatics in Primary Care*, 13, 171-178.

Focal Research (2004). 2003 NS VL responsible gaming features evaluation: Final report. Nova Scotia, Focal Research Consultants Ltd.

Fogg, B.J. (2003) PSD: Using Computers to Change What We Think and Do.



San Francisco, CA: Morgan Kaufmann Publishers.

Forsström, D., Hesser, H., Carlbring, P. (2015). Usage of a responsible gambling tool: A descriptive analysis of latent class analysis of user behavior. *Journal of Gambling Studies*. DOI 10. 1007/s10899-015-9590-6

Gaboury, A., & Ladouceur, R. (1989). Erroneous perceptions and gambling. *Journal of Social Behavior and Personality*, 4, 411-420.

Gainsbury, S. M. (2015). Online gambling addiction: the relationship between internet gambling and disordered gambling. *Current Addiction Reports*, 2(2), 185-193.

Griffiths, M. D., (1994). The role of cognitive bias and skill in fruit machine gambling. *British Journal of Psychology*, 85, 351-369.

Griffiths, M. D. (2003). Internet gambling: Issues, concerns and recommendations. *CyberPsychology and Behavior*, 6, 557-568.

Griffiths, M. D., Wood, R. T. A., Parke, J. (2009). Social responsibility tools in online gambling: a survey of attitudes and behavior among Internet gamblers. *CyberPsychology & Behavior*, 12, 413-421.

Hewett, T., Baecker, R., Card, S., Carey, T., Gasen, J., Mantei, M., & Verplanck, W. (1992). Technical Report. ACM SIGCHI Curricula for Human-



Computer Interaction. New York: ACM.

Hing, N. (2003). An assessment of member awareness, perceived adequacy and perceived effectiveness of responsible gambling strategies in Sydney clubs. Lismore, Australia: Centre for Gambling Education and Research.

International Gaming Research Unit (2007). 'The global online gambling report: An exploratory investigation into the attitudes and behaviours of Internet casino and poker players'. Final report prepared for eCOGRA (e-Commerce and Online Gaming Regulation and Assurance).

Janz, N. K., & Becker, M. H. (1984). The health belief model: A decade later. *Health Education Quarterly*, 11, 1-47.

Kuss, D. J., Griffiths, M. D., Karila, L. & Billieux, J. (2014). Internet addiction: a systematic review of epidemiological research for the last decade. *Current Pharmaceutical Design*, 20, 4026-4052.

Lapham, G. T., Hawkins, E. J., Chavez, L. J., Achtmeyer, C. E., Williams, ... Bradley, K.A. (2012). Feedback from recently returned veterans on an anonymous web-based brief alcohol intervention. *Addiction Science and Clinical Practice*, 7, 17

Ladouceur, R. & Sevigny, S. (2003). Interactive messages on video lottery terminals and persistence in gambling. *Gambling Research*, 15, 45-50.

LaBrie, R. A., Kaplan, S., LaPlante, D. A., Nelson, S.E., & Shaffer, H. J. (2008). Inside the virtual casino: A prospective longitudinal study of Internet casino gambling. *European Journal of Public Health*, 18, 410-416.

LaPlante, D.A., Kleschinsky, J. H., LaBrie, R. A., Nelson, S. E. & Shaffer, H. J. (2009). Sitting at the virtual poker table: A prospective epidemiological study of actual Internet poker gambling behavior. *Computers in Human Behavior*, 25, 711-717.

LaPlante, D. A., Schumann, A., LaBrie, R. A., & Shaffer, H. J. (2008). Population trends in Internet sports gambling. *Computers in Human Behavior*, 24, 2399-2414.

Lehto, T. & Oinas-Kukkonen, H. (2009). Persuasive features in web-based alcohol and smoking interventions: A systematic review of the literature. *Journal of Medical Internet Research*, 13(3), e46.

Maiman, L. A. & Becker, M. H. (1974). The Health Belief Model: Origins and correlates in psychological theory. *Health Education Monographs*, 2, 336-353.

McCusker, C., & Gettings, B. (1997). Automaticity of cognitive biases in addictive behaviors: further evidence with gamblers. *British Journal of Clinical Psychology*, 36, 543-554.

Meyer, G., Hayer, T. & Griffiths, M. D. (2009). *Problem Gaming in Europe: Challenges, Prevention, and Interventions*. New York: Springer.

Miller, W. R., & Rollnick, S. (1991). *Motivational interviewing: Preparing people to change addictive behavior*. New York, Guilford Press.

Monaghan, S. M. & Blaszczyński, A. (2007). Recall of electronic gaming machine signs: A static versus a dynamic mode of presentation. *Journal of Gambling Issues*, 20, 235-267.

Monaghan, S. M., Blaszczyński, A., & Nower, L. (2009). Do warning signs on electronic gaming machines influence irrational cognitions? *Psychological Reports*, 105, 173-187.

Monaghan, S. M. & Blaszczyński, A. (2010a). Impact of mode of display and message content of responsible gaming signs for electronic gaming machines on regular gamblers. *Journal of Gambling Studies*, 26, 67-88.

Monaghan, S. M. & Blaszczyński, A. (2010b). Electronic gaming machine warning messages: Information versus self-evaluation. *Journal of Psychology*, 144, 83-96.

McCormack, A. & Griffiths, M.D. (2013). A scoping study of the structural and situational characteristics of internet gambling. *International Journal of Cyber Behavior, Psychology and Learning*, 3(1), 29-49.

Munoz, Y., Chebat, J. C., & Borges, A. (2013). Graphic gambling warning: How they affect emotions, cognitive responses and attitude change. *Journal of Gambling Studies*, 29(3), 507-524.

Nelson, S. E., LaPlante, D. A., Peller, A. J., Schumann, A., LaBrie, R. A., & Shaffer, H. J. (2008). Real limits in the virtual world: Self-limiting behavior of Internet gamblers. *Journal of Gambling Studies*, 24, 463-477.

Obermayer J. L., Riley W. T., Asif, O., & Jean-Mary J. (2004). College smoking-cessation using cell phone text messaging. *Journal of American College Health*, 53, 71-79.

Orford, J., Sproston, K., Erens, B., & Mitchell, L. (2003). *Gambling and Problem Gambling in Britain*. Hove: Brunner-Routledge.

Parke, J., Griffiths, M. D. & Parke, A. (2007). Positive thinking among slot machine gamblers: A case of maladaptive coping? *International Journal of Mental Health and Addiction*, 5, 39-52.

Perloff, R.M. (2008). *The dynamics of persuasion: Communication and attitudes in the 21st century* (3rd ed.). New York: Lawrence Erlbaum Associates.

Preece, J., Sharp, H., & Rogers, Y. (2011). *Interaction design: Beyond*

human computer interaction (3rd ed.). Chichester: John Wiley & Sons Ltd.
 Prochaska, J. O., & DiClemente, C. C. (1983). Stages and processes of self-change of smoking: toward an integrative model of change. *Journal of Consulting and Clinical Psychology*, 51, 390-395.

Prochaska, J. O., & Prochaska, J. M. (1991). Why don't people change? Why don't continents move? *Journal of Psychotherapy Integration*, 9, 83-102.

Rizvi, S. L., Dimeff, L. A., Skutch, J., Carroll, D., Linehan, M. M. (2011) A pilot study of the DBT coach: An interactive mobile phone application for individuals with borderline personality disorder and substance use disorder. *Behavior Therapy*, 42, 589-600.

Rogers, R. W. (1983). Cognitive and physiological processes in fear appeals and attitude change: a revised theory of protection motivation. In J. T. Cacioppo and R. E. Petty (Eds.), *Social Psychophysiology: A sourcebook* (pp. 153-176). The Guildford Press: New York.

Schellink, T. & Schrans, T. (2002). Atlantic Lottery Corporation video lottery re-sponsible gaming feature research: Final report. Halifax, Nova Scotia: Focal Research Consultants.

Shneiderman, B., Plaisant, C., Cohen, M., & Jacobs, S. (2009). *Designing the user interface: Strategies for effective human-computer interaction* (5th ed.). Reading, MA: Pearson Addison-Wesley.

Stewart, M. J. & Wohl, M. J. A. (2013). Pop-up messages, dissociation, and craving: How monetary limit reminders facilitate adherence in a session of slot machine gambling. *Psychology of Addictive Behaviors*, 27, 268-273.

Stotts, A. L., Groff, J. Y., Velasquez, M. M., Benjamin-Garner, R., Green, C., Carbonari, J. P., & DiClemene, C.C. (2009). Ultrasound feedback and motivational interviewing targeting smoking cessation in the second and third trimesters of pregnancy. *Nicotine and Tobacco Research*, 11, 961-968.

Toscos, T., Faber, A., An, S., Gandhi, M.P. (2006). Chick Clique: PSD to Motivate Teenage Girls to Exercise. [CHI] 06'Extended Abstracts on Human Factors in Computing, , 1873-1878, New York: ACM.

Tsai, C. C., Lee, G., Raab, F., Norman, G. J., Sohn, T., Griswold, W. G., & Patrick, K. (2007) Usability and feasibility of PmEB: A mobile phone application for monitoring real time caloric balance. *Mobile Networks and Applications*, 12, 173-184.

Van den Putte, B., Yzer, M., Willemsen, M., & de Bruijn, G. J. (2009). The effects of smoking self-identity and quitting self-identity on attempts to quit smoking. *Health Psychology*, 28, 535-544.

Wardle, H., Griffiths, M.D., Orford, J., Moody, A. & Volberg, R. (2012). Gambling in Britain: A time of change? Health implications from the British Gambling Prevalence Survey 2010. *International Journal of Mental Health and Addiction*, 10, 273-277.

Williams, R.J., & Connolly, D. (2006). Does learning about the mathematics of gambling change gambling behavior? *Psychology of Addictive Behaviors*, 20, 62-68.

Witte, K. (1992). Putting the fear back into fear appeal: The extended parallel process model (EPPM). *Communication Monographs*, 61, 113-132.
 Witte, K., Meyer, G., & Martell, D. (2001). *Effective health risk messages: A step-by-step guide*. Thousand Oaks, CA: Sage Publications.

Wohl, M. J., Christie, K. L., Matheson, C., & Anisman, H. (2010). Animation-based education as a gambling prevention tool: Correcting erroneous cognitions and reducing the frequency of exceeding limits among slots players. *Journal of Gambling Studies*, 26, 469-486.

Wohl, M. J., Gainsbury, S., Stewart, M. J., & Sztainert, T. (2013). Facilitating responsible gambling: The relative effectiveness of education-based animation and monetary limit setting pop-up messages among electronic gaming machine players. *Journal of Gambling Studies*, 29, 703-717.

Wood, R. T. A., & Wohl, M. J. (2015). Assessing the effectiveness of a responsible gambling behavioural feedback tool for reducing the gambling expenditure of at-risk players. *International Gambling Studies*, DOI:10.1080/14459795.2015.1049191

Wohl, M.J., Parush, A. Kim, H.S., Warren, K. (2014). Building it better: Applying human-computer interaction and persuasive system design principles to a monetary limit tool improves responsible gambling. *Computers in Human Behavior*, 37, 124-132

Wulfert, E., Blanchard E. B., Freidenberg, B. M., Martell, R. S. (2006) Retaining pathological gamblers in cognitive behavior therapy through motivational enhancement: A pilot study. *Behavior Modification*, 30, 315-340.

Yzer, M. C., Siero, F. W., & Buunk, B. P. (2000). Can public campaigns effectively change psychological determinants of safer sex? An evaluation of three Dutch safer sex campaigns. *Health Education Research*, 15, 339-352.

Yzer, M. C., Fishbein, M., & Cappella, J. N. (2007). Using behavioral theory to investigate routes to persuasion for segmented groups: A case study of adolescent drug use. In Hinner, M. B. (Ed.), *Freiberger Beitrage zur Interkulturellen und Wirtschaftskommunikation: A Forum for General and Intercultural Business Communication* (Vol. 3) (pp. 297-320). Frankfurt am Main, Germany: Lang.

MARK D. GRIFFITHS, ANDREW HARRIS & MICHAEL AUER

Dr. Mark Griffiths is Professor of Behavioural Addiction at Nottingham Trent University, and Director of the International Gaming Research Unit. He is internationally known for his work into gambling and gaming addictions. He has published over 550 refereed research papers, five books, 130+ book chapters and over 1000 other articles. He has won 15 national/international awards for his work including the US National Council on Problem Gambling Lifetime Research Award (2013).

Andrew Harris holds a First Class Honours degree in Psychology with Clinical Psychology and is a winner of the British Psychology Society Award for undergraduate research. Andrew has published a number peer-reviewed papers in the gambling studies field on topics including executive control and responsible gambling tools. He is currently doing his PhD at Nottingham Trent University under the supervision of Professor Mark Griffiths, examining the impact of gambling game features on impulse control.

Michael Auer is Business Unit Manager, Responsible Gaming, neccton ltd (Vienna, Austria) and holds a Master's degree in Psychology and Statistics. Besides working for neccton ltd., he is also completing his PhD at Nottingham Trent University with Dr. Mark Griffiths. Mr. Auer is a regular speaker at gambling conferences, collaborates with recognized scientists in the field, and has published numerous peer-reviewed papers on player tracking and Responsible Gaming.