

<p>Institution: Nottingham Trent University</p>
<p>Unit of Assessment: A04 Psychology, Psychiatry and Neuroscience</p>
<p>Title of case study: Psychosocial impact of gaming</p>
<p>1. Summary of the impact (indicative maximum 100 words)</p> <p>The International Gaming Research Unit (IGRU) at NTU, led by Professor Mark Griffiths, has been influential in a number of key areas:</p> <ul style="list-style-type: none"> (i) Changing gambling law and policy around the world (ii) Co-authoring the British Gambling Prevalence Surveys (iii) Educating young people in schools about gambling through the production of materials for 11-16 year olds studying on the National Curriculum (iv) Chairing and contributing to national governmental bodies on gambling.
<p>2. Underpinning research (indicative maximum 500 words)</p> <p>Research at NTU into the psychosocial impact of gambling has led to a wide range of key impacts both nationally and internationally. In the UK, much of the impactful research has been carried out by IGRU, led by Professor Mark Griffiths, an acknowledged world expert in the area of behavioural addictions.</p> <p>Traditionally, the term “addiction” has been associated with substance use but in May 2013, gambling became the first non-substance activity to be officially classed as a behavioural addiction in the DSM-5. Griffiths’ large body of work played an important part in the APA’s decision and Griffiths was on one of the US DSM working parties that first met at UCLA in 2010 to help formulate the parameters of gambling disorder as a behavioral addiction.</p> <p>Griffiths has been a major contributor to the growing evidence base on addiction establishing how attitudes and key socio-demographic variables impact on health-related consequences of problem gambling and gambling addiction [References 1-3]. Using the DSM-IV criteria, the British Gambling Prevalence Survey, co-authored by Griffiths, revealed that 0.6%-0.9% of the British population aged 16+ years were problem gamblers [Reference 6]. Funded by bodies including the <i>Responsibility in Gambling Trust</i>, the <i>Gambling Commission</i> and the <i>Economic and Social Research Council</i>, his work has identified the personal costs for problem gamblers including irritability, extreme moodiness, problems with personal relationships (including divorce), absenteeism from work, neglect of family, and bankruptcy. In Griffiths’ report for the <i>British Medical Association</i> in 2007 (following up an influential 2004 paper in <i>the British Medical Journal</i>), he highlighted the diverse detrimental health consequences for gamblers and their partners, which included depression, insomnia, intestinal disorders, migraine, and other stress related disorders [Evidence 3a, 3b].</p> <p>Gambling addiction is not confined to the adult population and Griffiths has researched the effects of problem gambling on adolescents in UK studies, which he lists as: “truanting in order to play the machines, stealing to fund machine playing, getting into trouble with teachers and/or parents over their machine playing, borrowing or the using of lunch money to play the machines, poor schoolwork, and in some cases aggressive behaviour” (Griffiths, 2003). In addition, fruit machine addicts also display bona fide signs of addiction including withdrawal effects, tolerance, mood modification, conflict and relapse” [http://www.publications.parliament.uk/pa/cm201213/cmselect/cmcmds/421/421we38.htm].</p> <p>A second strand of Griffiths’ work identified the structural characteristics (i.e., features that gaming developers and operators incorporate into games to get people to gamble and which are critical in operant conditioning and other psychological processes). These include stake size, size of the jackpot, speed of the game and illusion of control elements [References 4,5]. IGRU research consistently shows that problem gaming tends to be associated with particular types structural features. Such findings have major implications for gaming regulators, gaming policy makers, gambling treatment service providers, and the gaming industry itself. Knowing about</p>

Impact case study (REF3b)

elements associated with problematic play can help in harm minimisation and the design of safer games. It is this work that has been employed by a number of national and regional governments, for example in Norway and Quebec [Reference 5].

3. References to the research (indicative maximum of six references)

1. **Wood, R.T.A. & Griffiths, M.D. (1998).** The acquisition, development and maintenance of lottery and scratchcard gambling in adolescence. *Journal of Adolescence*, 21, 265-273.
Journal ISSN 0140-1971; Impact Factor 2.20; Q1 status;
Paper citations 70.
2. **Griffiths, M.D. & Wood, R.T.A. (2000).** Risk factors in adolescence: The case of gambling, video-game playing and the internet. *Journal of Gambling Studies*, 16, 199-225.
ISSN 1573-3602; Impact Factor 1.62; Q2 status;
Paper citations 118.
3. **Griffiths, M.D., Davies, M.N.O. & Chappell, D. (2004).** Online computer gaming: A comparison of adolescent and adult gamers. *Journal of Adolescence*, 27, 87-96.
Journal ISSN 0140-1971; Impact Factor 2.20; Q1 status;
Paper citations 128.
4. **Wood, R.T.A., Griffiths, M.D., Chappell, D. & Davies, M.N.O. (2004).** The structural characteristics of games: A psycho-structural analysis. *CyberPsychology and Behavior*, 7, 1-10.
Journal ISSN 215-22715; Impact Factor 2.63; Q1 status;
Paper citations 83.
5. **Griffiths, M.D. (2003).** Internet gambling: Issues, concerns and recommendations. *CyberPsychology and Behavior*, 6, 557-568.
Journal ISSN 215-22715; Impact Factor 2.63; Q1 status;
Paper citations 82.
6. **Griffiths, M.D., Wardle, J., Orford, J., Sproston, K. & Erens, B. (2009).** Socio-demographic correlates of internet gambling: findings from the 2007 British Gambling Prevalence Survey. *CyberPsychology and Behavior*, 12, 199-202.
Journal ISSN 215-22715; Impact Factor 2.63; Q1 status;
Paper citations 37.

Competitive grants supporting this work

Griffiths, M. Director of Studies ESRC Case studentship on “Interactive Gambling Technologies: Addiction and Psychosocial Impact. A. McCormack 2007/10

Griffiths, M. & Wood, R. (2010). *The Nova Scotia Responsible Gambling Impact Index*. Nova Scotia Gaming Corporation, \$240K.

4. Details of the impact (indicative maximum 750 words)

Here we detail three key areas of impact by IGRU on policy, society and production:

1. **Impacts on public policy and services** IGRU’s work has been used to determine policy in many countries including Norway, Finland, Israel, and Australia. Here we detail impact within Norway and the UK on the effects of slot gambling machines on public health.

Reach 1: Griffiths’ work on the structural characteristics of slot machines (References 4 and 5) underpinned his oral and written evidence to the Supreme Court in Oslo as the Norwegian Government’s expert witness. [Evidence 1a, 1b]

Effect 1: As a consequence of Griffiths’ testimony, Norway banned slot machines in 2008 until

less harmful and more socially responsible machines were designed (June 2010). “[Dr. Griffiths] was the Norwegian government’s expert witness...in the court case that led to the temporary prohibition of slot machines in Norway...His testimony to the Supreme Court [was] key in the decision made to ban ‘old’ slot machines in Norway” (Deputy Director General, Royal Norwegian Ministry of Culture [Evidence 1a] and confirmed by the then CEO of Norsk Tipping [Evidence 1b]).

Reach 2: Griffiths’ work was central to the parliamentary Culture, Media and Sport Committee debate on slot machines and their psychosocial impact on the population.

Effect 2: Contribution to the policy debate - to quote from that committee’s report:

“In 2008, Dr. Griffiths [was] commissioned by the Department for Culture, Media and Sport to write me a report of the impact of high stakes gambling machines on problem gambling which [was] used to inform UK government policy” (UK Minister for Sport 2007-2009) [Evidence 1c]. As is confirmed in parliamentary report “The Gambling Act 2005: A bet worth taking?” [Evidence 3c].

“Dr. Griffiths was co-author of the last two British Gambling Prevalence Surveys (published in 2007 and 2011). These national studies...form the basis on which much of British gambling policy is based. They are arguably the most important gambling research studies that have been undertaken in Great Britain” (Secretary of State for Culture, Media and Sport, 2001-2007). [Evidence 1d].

2. **Impact on product development:** Griffiths, with Parke and Wood, developed a tool to help game developers design more responsible lower-risk games for vulnerable and susceptible individuals (Funder *Camelot Plc* £40,000). This led to the commercial development of *GAM-GaRD (Gambling Assessment Measure: Guidance about Responsible Design)*. In 2010, Griffiths and Wood developed the *Nova Scotia Responsible Gambling Impact Index (NS-RG-II)* (commissioned by *Nova Scotia Gaming Corporation* CAD\$250,000) concentrating on the situational characteristics of gambling. The NS-RG-II has now been incorporated into the previous tool and is sold and licensed as *GAM-GaRD 2.0*.

Reach: The tool is now a commercially available product used by numerous gaming companies around the world. In 2010, *the World Lottery Association* recommended that all its companies use this tool as part of their social responsibility accreditation procedures and in many countries (e.g. Norway, where it is not possible to attain gambling-licences without *GAM-GaRD* accreditation). “Dr. Mark Griffiths and I co-developed the gambling social responsibility tool *GAM-GaRD* based on our research into the structural characteristics of gambling. *GAM-GaRD* is a risk assessment tool [and] has been used by 30 gaming companies and gaming regulators worldwide” (CEO, *GamRes Ltd*, licenses *GAM-GaRD*). [Evidence 1e]

Effect: The use of this tool pinpoints ten known potentially addictive characteristics of games and offers companies practical ways to reduce the risk of players developing gambling problems by altering the games’ structural characteristics. This has been “of great use in helping protect gamblers from developing problems” [Evidence 1a]

3. **Impacts on health and welfare:** IGRU with *TACADE* were commissioned by the *Responsibility in Gambling Trust (RiGT)* grant: £240,000) to develop educational materials on young people and gambling based on Griffiths’ research [Evidence 3a, 3b]. Two major resource packs were developed: (i) *You Bet! Gambling Educational Materials For Young People Aged 11-16 Years*, and (ii) *Just Another Game? Gambling Educational Materials For Young People Aged 13-19 Years*. The resources were formally launched by Griffiths and *TACADE* at the House of Lords (March 2008), and continue to have impact in the current REF assessment period.

Reach: *You Bet! Gambling Educational Materials For Young People Aged 11-16 Years*, and *Just Another Game? Gambling Educational Materials For Young People Aged 13-19 Years* have been distributed across the secondary school secondary in England and Wales [Evidence 2a, 2b]. Griffiths spoke at ten regional training workshops for key stakeholders (schools, counselling

services).

Effect: *You Bet!* resources were accredited for use within the National Curriculum in 2009 for use in Personal and Social Health Education classes. In many 2011 national media reports, *GamCare* (the national gambling charity that runs the National Gambling Helpline) recommended all schools should use these resources.

5. Sources to corroborate the impact (indicative maximum of 10 references)

1. Key stakeholders who have provided signed written corroboration of the impact of Griffiths' work
 - a. Deputy Director General, Royal Norwegian Ministry of Culture has provided a letter confirming Griffiths' key role in the Norwegian legislation to ban certain slot machines with highly addictive features. [Impact 1: public policy]. He also confirms that the Norwegian Gaming Authority uses *Gam-GaRD* to test new machines before issuing licences. [Impact 3: health and welfare]
 - b. Former CEO, *Norsk Tipping* (Norway's monopoly gaming operator) has provided a letter corroborating Griffiths' impact on Norwegian legislation as in 1a above. [Impact 1: public policy]
 - c. UK Minister for Sport 2007-2009 can confirm that the UK's gambling policy was based on British Gambling Prevalence Surveys [Impact 1: public policy]
 - d. The Secretary of State for Culture, Media and Sport, 2001-2007 confirms that Griffiths expert evidence, including briefing reports requested by the Secretary of State, underpin much of British gambling policy [Impact 1: public policy]
 - e. CEO, *GamRes Ltd* confirms Griffiths' role in the development of *Gam-GaRD* and its use by 30 gaming companies worldwide. [Impact 2: product development]

2. The following education material has been developed and disseminated throughout schools in the UK by TACADE/International Gaming Research Unit. Professor Griffiths also disseminated the resources at 10 regional seminars funded by the RiGT
 - a. *You Bet! Gambling Educational Materials For Young People Aged 11-16 Years*. Tacade: Manchester (ISBN: 1-902-469-194) [impact 3: health and welfare]
 - b. *Just Another Game? Gambling Educational Materials For Young People Aged 13-19 Years*. Tacade: Manchester (ISBN 1-902469-208). [Impact 3: health and welfare]

3. Major reports available in the public domain:
 - a. Griffiths, M.D. (2007). *Gambling Addiction and its Treatment Within the NHS*. London: British Medical Association (ISBN 1-905545-11-8). (46pp). [Impact 3: health and welfare]
 - b. Griffiths, M.D. (2007). Gambling addiction in the UK. In K. Gyngell (Ed.), *Breakthrough Britain: Ending the Costs of Social Breakdown*. pp. 393-426. London: Social Justice Policy Group. [Impact 3: health and welfare]
 - c. Culture, Media and Sport Committee The Gambling Act 2005: A bet worth taking? First Report of Session 2012–13. Volume I: Report, together with formal minutes, oral and written evidence. House of Commons. Published on 24 July 2012 by authority of the House of Commons London: The Stationery Office Limited. [Over 15 of Griffiths' research papers were cited on pages 12, 16, 90, 194-196, 280, 284-286, 288). [Impact 1: public policy]