

Institution: Bath Spa University		
Unit of Assessment: 4 - Psychology, Psychiatry and Neuroscience		
Title of case study: Changing the way that we view video games and their effects		
Period when the underpinning research was undertaken: 2014 - 2020		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
Prof Peter Etchells	Professor of Psychology and Science Communication	10/9/2012 - present
Period when the claimed impact occurred: 2014 - 2020		
Is this case study continued from a case study submitted in 2014? N		
1. Summary of the impact		
<p>Digital media, particularly in the form of social media and video games, have been an enduringly controversial topic for both science and the general public for several decades. Over the last six years, Etchells has developed a targeted programme of research and public engagement, to enhance our understanding of how video game play specifically, and screen time more generally, affect behaviour and health. His work focuses on accurately communicating the evidence base of the relevant research to parents, teachers, clinicians, journalists, children's organisations and policymakers. As a result, the main impact of Etchells' work has been to inform and change the viewpoints of journalists, parents and professional bodies, as well as inform national policy recommendations. His work has contributed to a number of key parliamentary reports on the nature of immersive and addictive technologies and has led to a shift in the way video game research is communicated in the mainstream media.</p>		
2. Underpinning research		
<p>Despite the ubiquity of video games and smartphones in modern society, there is currently little agreement in the scientific literature about exactly how the use of digital technology has either positive or negative effects on human behaviour, particularly in terms of aggression and mental health. In conducting research on social media use, video game play and screen time, it is difficult to move beyond correlational associations to demonstrate causation. Experimental work seeking to establish whether playing violent video games causes aggression falls foul of a number of questionable research practices (for example, repeatedly analysing data using multiple methods in order to find statistically significant effects), and this makes it difficult for scientists to reach a consensus about the association. One of the best methods which we can use to try to understand these links is the use of large-scale longitudinal datasets. Etchells' work has focused on using one dataset, the Avon Longitudinal Study of Parents and Children, in order to (a) provide a more nuanced understanding of the extent to which video game and screen use has an impact on behaviour and health, and (b) generate useful and appropriate research questions to use in tests for causal associations.</p> <p>The published studies arising from this research have made a number of original contributions to our understanding of the effects of digital technology. In 2016, research published by Etchells et al. (R1) looked at the association between playing different types of video games at a young age (8/9 years), and later symptoms of conduct disorder (age 15/16), which is a clinically-validated measure of real-life aggressive behaviours. The study revealed that while there is an association between playing games which are more likely to contain violent content and later aggressive behaviours, it was in fact quite weak, and the overall risk of developing conduct disorder was extremely small. In addition, the analysis showed that violent content is not the only contributing factor that needs to be taken into account. Other factors, such as how arousing or competitive a game is, are important. This study was unique among similar longitudinal research in that it</p>		

tested the association over an extended time scale (whereas most others have assessed over 2-3 years) and used a real-world measure of aggression (as opposed to self-report questionnaires).

Following this work, in 2018 Etchells collaborated with researchers from numerous institutions world-wide (Van Rooij et al.; R2) to argue that the current scientific basis for establishing criteria for 'gaming disorder' – essentially, a behavioural addiction to video gaming – is incomplete, inconsistent, and methodologically poor. This paper remains one of the most important contributions to current discussions about whether or not gaming addiction should be classed as an official disorder. It highlights that, on the basis of existing scientific evidence, any set of formal diagnostic criteria would be premature and likely to be detrimental to our understanding of the nature of the problem.

In 2019, Etchells' research in collaboration with colleagues at Bristol and Swansea universities (Khouja et al.; R3) looked at the association between various types of screen time (watching television, using a computer and texting) at different times during the week at age 16, and instances of anxiety and depression at age 18. The results suggested a small increase in risk of anxiety if there was increased computer use throughout the week, and a small increase in risk of depression with weekend computer use. Critically, the associations for anxiety were reduced if time spent alone was accounted for, suggesting that other issues such as loneliness or isolation may act as precipitating factors. One of the key contributions of this paper was to highlight the need for future research to move beyond screen time as a general category and test the effects of specific types of screen use.

3. References to the research

R1. Etchells, P.J, Gage, S.H, Rutherford, A.D and Munafò, M.R (2016) '[Prospective investigation of video game use in children and subsequent conduct disorder and depression using data from the Avon Longitudinal Study of Parents and Children.](#)' *PLoS ONE*, 11 (1). e0147732

R2. Van Rooij, A.J., Ferguson, C.J., Colder Carras, M., Kardefelt-Winther, D., Shi, J., Aarseth, E., Bean, A.M., Bergmark, K.H., Brus, A., Coulson, M., Deleuze, J., Dullur, P., Dunkels, E., Edman, J., Elson, M., Etchells, P.J., et al. (2018) '[A weak scientific basis for gaming disorder: let us err on the side of caution.](#)' *Journal of Behavioural Addictions*, 7 (1). pp. 1-9

R3: Khouja, J.N, Munafò, M.R, Tilling, K, Wiles, N.J, Joinson, C, Etchells, P.J, John, A, Hayes, F.M, Gage, S.H and Cornish, R.P (2019) '[Is screen time associated with anxiety or depression in young people? Results from a UK birth cohort.](#)' *BMC Public Health*, 19. e82

Funding

- Etchells (PI), *Screen Time: Research, policy and communication in a digital era* (2017-2018), British Academy, GBP14,909
- Etchells (PI), *Gambling and Gaming* (2020-2021), British Academy, GBP99,548.80

4. Details of the impact

Etchells' work on video games and screen time has led to a number of opportunities to promote, explain and discuss the underpinning research in a variety of public contexts: for example, through public lectures, writing for popular media, publishing a popular science book, and commenting on television and radio. This has fed directly into discussions that have shifted the narrative and general understanding of the effects that digital technology use can have, away from moral panics about solely detrimental effects, and towards a more nuanced understanding of how we can best balance the risks and benefits of technology use.

Changing the viewpoints of journalists, parents and professional bodies

On the basis of the underpinning research, in 2018/19 Etchells wrote and published a popular science book called *Lost in a Good Game: Why We Play Games and What They Can Do For Us*. This was a means to disseminate the complexities of the extant research literature, and to respond to the cycle of moral panics about video games and screen time that often persist in the

mainstream news media. To date approximately 6,000 copies (E1) of the book have been sold in English-speaking countries (including, but not limited to, the UK, USA, Canada, Australia, New Zealand and South Africa), and a Korean translation will follow soon. The book has received widespread positive recommendations in the press (E2), noted as a “convincing debut... Those interested in the effects of playing video games will find here much to ponder” (E2.1), with some “cheered by a heartfelt defence of a demonised pastime” (E2.2), and others arguing that it is “blisteringly relevant... enriching and touching, while issuing a challenge to the bad science surrounding the subject” (E2.3). Further coverage has highlighted that the book provides a more mature way of thinking about video games that is both useful and relevant for concerned members of the public – for example, one outlet argues that “Etchells does a great job of reassuring us that, as long as we’re having fun, there isn’t any need to worry” (E2.4). The international press presents similar evaluations highlighting the shift in thinking that the book affords – for example, “Etchells is trying to capture the current conversation around video games, while also being quite aware that he has to cater to people who are still having the old conversation... Etchells is a skilled enough writer to speak to both” (E2.5).

The publication of *Lost in a Good Game* has led to discussions around the effects of screen time and video games with a number of key stakeholders, including journalists, parents and professional bodies. As a result of successfully communicating both the uncertainty around these effects, as well as highlighting research suggesting minimal risks, these stakeholders have expressed a change in opinion and beliefs about digital technology. For example, in an April 2019 interview in the *Sunday Times Magazine* (E2.6), the interviewing journalist commented that he “banned his children from playing games consoles, until a pioneering psychologist changed his mind”. While the journalist started from the position of someone who was against allowing children to play video games, Etchells’ explanation of the underpinning research – both through the book and subsequent interviews– made the journalist re-evaluate his views on parenting technology use, and he even went on to purchase a games console for his children. In January 2018, Etchells convened and spoke at a public engagement event funded by the British Academy (E3), which was held at the Wellcome Collection in London and brought together scientists, journalists, clinicians, representatives of professional bodies and civil servants to communicate cutting-edge research into screen time and video games. The editor of *Psychologist* magazine wrote a report (E4) explaining how Etchells’ event and his involvement in discussions of the underpinning research allowed him to “see screen time differently” and develop a more positive perspective on video games and screen use. A key stakeholder in ParentZone (an organisation which provides support and information to parents, children and schools about online safety and video game effects) expressed a positive change of view about video gaming in light of discussions around Etchells’ book and underpinning research (E5). In conclusion, dissemination of the underpinning research has resulted in a shift in the public narrative concerning video games, away from polarised narratives about absolute risks or benefits, towards a more nuanced and accurate discussion of subtler effects.

Impact on national policy recommendations

Between 2014 and 2018 Etchells was the science blog network coordinator for *The Guardian*, which at its peak had a monthly readership of 1.6 million unique visitors per month. He established and took a lead role in writing for the newspaper’s psychology blog, ‘Head Quarters’, and wrote regularly about both his own research and the general literature on video game and screen time effects (E6). As a result of promoting the underpinning research on an international news platform and becoming a well-known expert in the area, since 2018 he has had the opportunity to provide evidence to parliamentary enquiries concerning the screen use and immersive and/or addictive technologies on health and wellbeing. Evidence submitted on the basis of the underpinning research and written science communication efforts, featured in the 2019 House of Commons Science and Technology Committee report on the impact of social media and screen-use on young people’s health (E7), where Etchells is directly named and quoted regarding the complex nature of conducting screen time research. In addition, the report names a 2017 open letter in *The Guardian* (E8), organised by Etchells and signed by an international group of scientists, which argues for a nuanced approach to screen time research.

Etchells was an interviewee and reviewer for a Parliamentary Office of Science and Technology research briefing on screen use and health in young people, which was published in 2020 (E9). Etchells also collaborated with colleagues to submit research-based evidence to the 2019 House of Commons Digital, Culture, Media and Sport (DCMS) Committee report on immersive and addictive technologies (E10). In line with this evidence, Etchells and colleagues recommended that video games companies be required to make aggregate data available to researchers, and to contribute financially to independent research. This was a key highlight of the report, and subsequently video games companies have started to become more engaged with researchers in this area. Etchells has recently joined an industry-academia working group to liaise closely with The Independent Game Developers Association, with the aim of allowing relevant researchers access to aggregated player data. More broadly, the research has made a strong contribution to parliamentary recommendations, which are in the process of driving change concerning how video games are monetised in the context of the Gambling Act 2005. Via online discussions and roundtable events, Etchells continues to be in close discussion with the DCMS to ensure that such changes are evidence-based, appropriate and effective.

5. Sources to corroborate the impact

E1. Information from Icon Books (*Lost in a Good Game* publisher) regarding sales figures (via email).

E2. Press cuttings:

- E2.1 Anon. 'Lost in a Good Game review', *Publishers Weekly* (online, September 2019).
- E2.2 Bennion, C., 'Turn on, log in, connect with humanity', *The Times Saturday Review* (13 April 2019 edition), 14.
- E2.3 Parkin, S., 'Play fights: the joys and dangers of video games', *New Statesman*, (online, 29 May 2019).
- E2.4 Anon, 'The science of gaming' 4* review, *How It Works* (18 April 2019 edition), 88; 68.
- E2.5 Brooks, S., 'A book that redeems video games – and the people who play them', *The Spinoff NZ*, (online July 2019).
- E2.6 Rudd, M., 'Player V Parent', *Sunday Times Magazine* (7 April 2019 edition), 21-27.

E3. British Academy Rising Star Engagement Grant EN160043, 'Screen Time: Research, policy and communication in a digital era'. <https://www.thebritishacademy.ac.uk/funding/ba-rising-star-engagement-awards-past-awards-2017>

E4. Sutton, J., 'Seeing Screen Time Differently', *The Psychologist* (March 2018), 31. <https://thepsychologist.bps.org.uk/volume-31/march-2018/seeing-screen-time-differently>

E5. Letter from Deputy CEO of ParentZone (2019). Testimonial highlighting the impact that *Lost in a Good Game* has had on changing parental viewpoints about video games (via email).

E6. Published articles for *The Guardian*. <https://www.theguardian.com/profile/pete-etchells>

E7. House of Commons Science and Technology Committee, 'Impact of social media and screen-use on young people's health: Fourteenth Report of Session 2017-19' (2019). <https://publications.parliament.uk/pa/cm201719/cmselect/cmsctech/822/822.pdf>

E8. Etchells, P., et al. 'Screen time guidelines need to be built on evidence, not hype' (open letter), *The Guardian* (online, January 2017). <https://www.theguardian.com/science/head-quarters/2017/jan/06/screen-time-guidelines-need-to-be-built-on-evidence-not-hype>

E9. Parliamentary Office of Science and Technology, Research Briefing: 'Screen use and health in young people' (2020). <https://post.parliament.uk/research-briefings/post-pn-0635/>

E10. House of Commons Digital, Culture, Media and Sport Committee, 'Immersive and addictive technologies: Fifteenth Report of Session 2017-19' (2019). <https://publications.parliament.uk/pa/cm201719/cmselect/cmcmums/1846/1846.pdf>