Principal Investigators (in alphabetic order)

Dr. Christian Montag is Professor for Molecular Psychology at Ulm University in Ulm, Germany and also works as visiting professor at UESTC, Chengdu, China. Among his research interests is the study of the psychological and neuroscientific underpinnings of Internet Use Disorders. He is on the editorial board of the journals Addictive Behaviors, International Journal of Environmental Research and Public Health and Personality Neuroscience. He published numerous papers in international peer-reviewed journals with high reputation. Dr. Christian Montag works independently, and his research is not influenced by Turtle Entertainment and their platform ESL. For an overview on his research please see: https://www.researchgate.net/profile/Christian Montag; Twitter: @ChrisMontag77

Dr. Halley Pontes is a Senior Lecturer in Psychology at Nottingham Trent University, United Kingdom. His primary research interest is related to the clinical and psychometric assessment of technological addictions such as Internet, videogame, and social media addiction. Dr. Pontes is also Associated Editor for leading journals in the field such as the Journal of Behavioral Addictions. Dr. Pontes works independently, and his research is not influenced by Turtle Entertainment and their platform ESL. For an overview on his research please see: https://www.researchgate.net/profile/Halley_Pontes ; Twitter: @DrHalleyPontes

Dr. Bruno Schivinski is a sociologist and Lecturer in Marketing at Birkbeck, University of London, United Kingdom. He consults for online service providers, websites, and scientific institutions such as the Polish Ministry of Science and Higher Education (MNiSW) and the National Science Centre (NCN) in Poland. Dr. Schivinski is also Associated Editor for the Management and Business Administration, Central Europe Journal. Dr. Schivinski works independently, and his research is not influenced by Turtle Entertainment and their platform ESL. For overview his an on research please see: https://www.researchgate.net/profile/Bruno Schivinski; Twitter: @Schivinski

Background

There has been a steady rise in the popularity of (Internet-)video games as a pass time and leisure activity over the last few years. Without doubt playing games has become an integral part of many people's lives and clearly also of pop-culture. Video games, particularly Internet gaming activities play a major role in the leisure and social pursuits of children, adolescents,

and adults. According to a national wide study conducted in the United States of America (USA), about 65% of all households in the USA are home to someone who plays video games on a regular basis, with 67% of all American households owning a device used to play video games (Entertainment Software Association, 2017). Regarding the key demographics of gamers, the average gamer is 35 years old and about 41% of all gamers in the USA are women (Entertainment Software Association, 2017). Interestingly, the female age group that plays the most is aged 50 years or more (13%), in comparison to under 18 years (11%), 18-35 years (10%), and 36-49 years (8%) gamers. In males, gaming is mostly prevalent among under 18 years (18%) in comparison to gamers with ages between 18-35 years (17%), 36-49 years (11%), and older than 50 years (13%). These figures clearly debunk old stereotypes that the average gamer is a lonely teenager as this data illustrate that video games are widespread across society and played by both genders relatively equally at all age groups even though male and females play different types of video games. The motivation to play a video game is manifold and range from casual gaming with the aim to socialize via video games, explore all features of a game or achieve the highest score to professional gaming, whereas here gamers see their gaming activity as part of a professional career.

Video game effects

Over the past two decades, researchers have been investigating a wide range of effects associated to video game play. Those effects are usually related to how playing video games may generate aggressive behavior, addiction, and other controversial mental health problems such as depression, anxiety, and stress. Despite the potential controversial adverse effects, video games can result in a wide range of psychological, social, and cognitive advantages. For example, early research demonstrated that at the cognitive level, playing video games can result in significantly better hand-eye motor coordination on a rotary pursuit task (Griffith, Voloschin, Gibb, & Bailey, 1983). More recently, research found that video game players exhibit better performance in perceptual and attentional tasks than non-gamers (Howard, Wilding, & Guest, 2016), and that video games may also help diminish cognitive decline in older adults as older adults playing strategy games were shown to have obtained significant improvements in their working memory, abstract reasoning, distractor inhibition, and mental rotation and a significant reduction in task-switching costs after training compared with those receiving no intervention (Basak, Boot, Voss, & Kramer, 2008). Indeed playing video games is for the most part a healthy and highly enjoyable activity. However, some players may also experience negative consequences due to their gaming patterns.

How big of a problem is video game addiction?

In terms of the potential addictive nature of video games, this phenomenon is usually reflected as a persistent and recurrent engagement with video games, often with other players, leading to clinically significant impairments or distress over a period of 12 months (American Psychiatric Association, 2013). Large studies have suggested that video game addiction can affect a small minority of gamers across different regions of the world. More specifically, prevalence rates reported by robust studies using large and representative samples have been found to range from 0.7% in Norway (Brunborg, Hanss, Mentzoni, & Pallesen, 2015) to 9.3% in Lithuania (Ustinavičienė et al., 2016). The World Health Organization (WHO) will include (Internet) Gaming Disorder in their newest update in the subcategory "Disorders due to Addictive Behaviors" of the International Classification of Diseases-11 (ICD-11) underlining that gaming in extreme forms can cause a lot of trouble for the persons afflicted and might warrant treatment.

This is also in line with a growing body of literature from the neurosciences, demonstrating that Gaming Disorder and other forms of classic substance related addictive behavior share some common biological mechanisms in the human brain. Among others it has been shown that "addicted" gamers show cue-reactivity to gaming related cues (e.g. Ko et al., 2008), which means that their reward circuitries of the brain strongly responds to gaming cues such as a picture of one's own current favorite game, which is line with what has been observed with alcoholics viewing their favorite drinks or other drug-addicted persons and their respective drugs. Moreover, Gaming Disorder has been associated with impaired learning abilities (e.g. Sariyska et al., 2017) and impaired top-down control, hence the wanting to play a game is not sufficiently buffered by the cortical thinking cap guiding the addicted gamer to the more important homework or academic work to do (see a simplified framework in Montag & Reuter, 2017).

What can we do about it?

To better understand the potential effects of video games, it is important that robust studies are conducted. One potential way for achieving this is by working directly with gaming communities. For this reason, we would like to ask you to participate in our study about video game effects and psychological wellbeing so you can play an active part in this mission. We hope that the highest possible number of gamers independent of their single/private addictive tendencies towards gaming will support the present study, because one of our goals is to get at the real numbers of Gaming Disorder in the gaming population (see also below). Therefore, a high number of participants with a broad background of gaming behavior allows us to infer correct numbers.

Note that by participating in this study you will be able to get an instant feedback about your own gaming behavior set into the context of all participants of the study so far. This may be useful if you are concerned with your gaming activity, because you can compare your own reported gaming activity with those of the community. Please note that participation is completely anonymous and all information provided here only gives you tendencies and should not be seen as a final diagnosis. In case you might want to seek further help after participation, we provide you with contact information of professional counselors, who specialized in the treatment of Gaming Disorder.

Of importance, as researchers we seek not to overpathologize everyday life behaviors. For many persons, gaming represents a joyful experience and fun leisure activity. Nevertheless, it has been well-documented that a rather small, but growing group, experiences problems due to the gaming. With the present work (and as mentioned), we want to get insights into a) the appropriate number of Gaming Disorder in Gaming populations and b) which factors might represent vulnerability/resilience factors.

Of note, the present research endeavor has been approved by the ethic committee of Nottingham Trent University (Pontes 2018/95) and registered officially as a study at the Open Science Framework (OSF) to ensure the highest transparency standards.

This is how the feedback will be provided to you. Of course, all graphs are accompanied by detailed text information.







You will see your own scores with respect to Gaming Disorder, Gaming Motivation and Personality compared to all other participants (note that at the beginning of the study, we include for Gaming Disorder and Personality some already available data; scores on motivation will follow, soon). Of importance: If you save the link to your personal feedback website with a bookmark, you will be able to come back at a later time and compare your scores again to the then larger available data set.

We are grateful if you consider to participate and hope that you will discover the science behind video game effects!

Start on <u>www.do-i-play-too-much-videogames.com</u> !!!

Imprint

Prof. Dr. Christian Montag Ulm University Helmholtzstr. 8/1 89081 Ulm Germany mail: info@do-i-play-too-much-videogames.com