

Nick Ballou

Behavioural Data Science 🎮 Media Psychology 📱 Digital Wellbeing

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Academic Positions

2023– **Postdoctoral Researcher**

- Group: Digital Wellbeing Lab led by **Professor Andrew Przybylski**
- Topic: Video games' effects on mental health, using digital trace data
- Open source and industry-partnered (e.g., Nintendo & Xbox) data collection

Oxford Internet Institute
University of Oxford

Education

2023 **PhD in Intelligent Games & Game Intelligence, *no corrections***

- **Thesis:** The Basic Needs in Games (BANG) Model of Video Games and Mental Health
- Supervisors: Dr Laurissa Tokarchuk, Dr David Zendle, and Prof Sebastian Deterding

Queen Mary
University of London

2018 **MPhil in Applied Linguistics, *with distinction***

University of Cambridge

2016 **BS in Linguistics, *magna cum laude***

Tulane University

Skills

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|---------------------------------|---|
| Statistical Programming | R, Quarto, GL(M)Ms, Monte Carlo simulation, data visualization |
| Behavioural Data Science | Digital trace data, user analytics, predictive modelling, longitudinal data |
| Media effects | Displacement, player experience, self-determination theory, disordered gaming |
| Research Methods | Causal inference, qualitative, quantitative, secondary data use |
| Open Science | Open data/materials/code, preregistration, questionable research practices, open access |

Publications




An up-to-date record is always available at [🔍Google Scholar](#). All my articles are available open access by clicking the [🔓](#) icons.

Journal Articles

- 2025 **Ballou N**, Hakman T, Vuorre M, Magnusson K & Przybylski AK.
How Do Video Games Affect Mental Health? A Narrative Review of 13 Proposed Mechanisms.
Technology, Mind, and Behavior, [10.1037/tmb0000152](#). [🔓](#)
- 2025 **Ballou N**, Vuorre M, Hakman T & Przybylski AK.
Perceived Value of Video Games, but Not Hours Played, Predicts Mental Well-Being in Casual Adult Nintendo Players.
Royal Society Open Science, [10.1098/rsos.241174](#). [🔓](#)
- 2025 Mansfield KL, Ghai S, Hakman T, **Ballou N**, Vuorre M & Przybylski AK.
From Social Media to Artificial Intelligence: Improving Research on Digital Harms in Youth.
The Lancet Child & Adolescent Health, [10.1016/S2352-4642\(24\)00332-8](#). [🔓](#)
- 2024 **Ballou N**, Denisova A, Ryan R, Rigby CS & Deterding S.
The Basic Needs in Games Scale (BANGS): A New Tool for Investigating Positive and Negative Video Game Experiences.
International Journal of Human-Computer Studies, [10.1016/j.ijhcs.2024.103289](#). [🔓](#)
- 2024 **Ballou N** & Deterding S.
The Basic Needs in Games Model of Video Game Play and Mental Health.
Interacting with Computers, [10.1093/iwc/iwae042](#). [🔓](#)
- 2024 **Ballou N**, Sewall CJR, Ratcliffe J, Zendle D, Tokarchuk L & Deterding S.
Registered Report Evidence Suggests No Relationship Between Objectively-Tracked Video Game Playtime and Wellbeing Over 3 Months.

- Technology, Mind, and Behavior*, [10.1037/tmb0000124](#). 
- 2024 Vuorre M, **Ballou N**, Hakman T, Magnusson K & Przybylski AK.
Affective Uplift During Video Game Play: A Naturalistic Case Study.
Games: Research and Practice, [10.1145/3659464](#). 
- 2023 **Ballou N**.
A Manifesto for More Productive Psychological Games Research.
Games: Research and Practice, [10.1145/3582929](#). 
- 2023 Zendle D, Flick C, Gordon-Petrovskaya E, **Ballou N**, Xiao LY & Drachen A.
No Evidence That Chinese Playtime Mandates Reduced Heavy Gaming in One Segment of the Video Games Industry.
Nature Human Behaviour, [10.1038/s41562-023-01669-8](#). 
- 2023 Zendle D, Flick C, Halgarth D, **Ballou N**, Cutting J & Drachen A.
The Relationship Between Lockdowns and Video Game Playtime: Multilevel Time-Series Analysis Using Massive-Scale Data Telemetry.
Journal of Medical Internet Research, [10.2196/40190](#). 
- 2023 Zendle D, Flick C, Halgarth D, **Ballou N**, Demediuk S & Drachen A.
Cross-Cultural Patterns in Mobile Playtime: An Analysis of 118 Billion Hours of Human Data.
Scientific Reports, [10.1038/s41598-022-26730-w](#). 
- 2022 **Ballou N** & Zendle D.
“Clinically Significant Distress” in Internet Gaming Disorder: An Individual Participant Meta-Analysis.
Computers in Human Behavior, [10.1016/j.chb.2021.107140](#). 
- 2021 **Ballou N** & Van Rooij AJ.
The Relationship between Mental Well-Being and Dysregulated Gaming: A Specification Curve Analysis of Core and Peripheral Criteria in Five Gaming Disorder Scales.
Royal Society Open Science, [10.1098/rsos.201385](#). 
- 2021 Vuorre M, Zendle D, Petrovskaya E, **Ballou N** & Przybylski AK.
A Large-Scale Study of Changes to the Quantity, Quality, and Distribution of Video Game Play during a Global Health Pandemic.
Technology, Mind, and Behavior, [10.1037/tmb0000048](#). 
- 2020 Zendle D, Meyer R & **Ballou N**.
“The Changing Face of Desktop Video Game Monetisation: An Exploration of Trends in Loot Boxes, Pay to Win, and Cosmetic Microtransactions in the Most-Played Steam Games of 2010-2019”.
PLOS ONE, [10.1371/journal.pone.0232780](#). 
- 2020 Zendle D, Meyer R, Cairns P, Waters S & **Ballou N**.
“The Prevalence of Loot Boxes in Mobile and Desktop Games”.
Addiction, [10.1111/add.14973](#). 

Conference Papers

- 2024 Kao D, **Ballou N**, Gerling K, Breitsohl H & Deterding S.
How Does Juicy Game Feedback Motivate? Testing Curiosity, Competence, and Effectance
CHI '24 Conference on Human Factors in Computing Systems, [10.1145/3613904.3642656](#). 
- 2023 **Ballou N** & Deterding S.
‘I Just Wanted to Get It Over and Done With’: A Grounded Theory of Psychological Need Frustration in Video Games
CHI PLAY '23 Symposium on Computer-Human Interaction in Play, [10.1145/3611028](#). 
- 2023 **Ballou N**, Zendle D, Cutting J & Gordon-Petrovskaya E.
Four Grand Challenges for Video Game Effects Scholars: How Digital Trace Data Can Improve the Way We Study Games
ICA '23: International Communication Association, [10.31234/osf.io/ua6nr](#). 
- 2023 Park S et al.

Learnings from the Case Maple Refugee: A Story of Free-to-Play, Probability, and Gamer Consumer Activism

DiGRA '23. [📄](#)

- 2022 **Ballou N**, Deterding S, Iacovides I & Helsby L.
Do People Use Games to Compensate for Psychological Needs During Crises? A Mixed-Methods Study of Gaming During COVID-19 Lockdowns
CHI '22 Conference on Human Factors in Computing Systems, [10.1145/3491102.3501858](#). [📄](#)
- 2022 **Ballou N**, Gbadamosi C & Zendle D.
“The Hidden Intricacy of Loot Box Design: A Granular Description of Random Monetized Reward Features”.
DiGRA '22, [10.31234/osf.io/xeckb](#). [📄](#)
- 2021 **Ballou N**, Breitsohl H, Kao D, Gerling K & Deterding S.
Not Very Effective: Validity Issues of the Effectance in Games Scale
CHI PLAY '21 Extended Abstracts, [10.1145/3450337.3483492](#). [📄](#)
- 2021 **Ballou N**, Warriar VR & Deterding S.
“Are You Open? A Content Analysis of Transparency and Openness Guidelines in HCI Journals”
CHI '21 Conference on Human Factors in Computing Systems, [10.1145/3411764.3445584](#). [📄](#)
- 2021 Ratcliffe J, **Ballou N** & Tokarchuk L.
Actions, Not Gestures: Contextualising Embodied Controller Interactions in Immersive Virtual Reality
Proceedings of the 27th ACM Symposium on Virtual Reality Software and Technology, [10.1145/3489849.3489892](#). [📄](#)

Team Science and Consortia

- 2022 Parsons S, Azevedo F, Elsherif MM & **110 others including Ballou N**.
A Community-Sourced Glossary of Open Scholarship Terms.
Nature Human Behaviour, [10.1038/s41562-021-01269-4](#). [📄](#)
- 2022 Stewart S, Pennington CR & **8 other UKRN leads including Ballou N**.
Reforms to Improve Reproducibility and Quality Must Be Coordinated across the Research Ecosystem: The View from the UKRN Local Network Leads.
BMC Research Notes, [10.1186/s13104-022-05949-w](#). [📄](#)

Pre-prints and Juried Work

- 2025 **Ballou N**, Bowman ND, Hakman T & Przybylski AK.
Reliving 10 Years Old: Descriptive Insights into Retro Gaming.
PsyArXiv, [10.31234/osf.io/wt6yb_v1](#). [📄](#)
- 2025 **Ballou N**, Földes TA, Hakman T & Przybylski AK.
Ill Health and Grief Fuel Gaming, While Lethargy Slows It: Playtime–Wellbeing Confounds from the Player Perspective.
PsyArXiv, [10.31234/osf.io/2v73d_v3](#). [📄](#)
- 2025 Karhulahti VM, Huntington-Klein N & **Ballou N**.
Claims for No Evidence Also Need Evidence.
PsyArXiv, [10.31234/osf.io/n2rka_v3](#). [📄](#)
- 2025 Xiao LY, **Ballou N** & Eben C.
Fundamental Flaws in the Design and Reporting of Chew and Neo (2024).
Trends in Psychology, [10.1007/s43076-025-00486-4](#). [📄](#)
- 2024 **Ballou N**, Földes AT, Hakman T, Vuorre M, Magnusson K & Przybylski AK.
Psychological Wellbeing, Sleep, and Video Gaming: Analyses of Comprehensive Digital Traces [Accepted Stage 1 Programmatic Registered Report].
Peer Community In Registered Reports, [10.17605/OSF.IO/65GA3](#). [📄](#)
- 2023 Xiao LY & **Ballou N**.
Pinpointing the Problem: Providing Page Numbers for Citations as a Crucial Part of Open Science.

PsyArXiv, [10.31219/osf.io/2um67](https://doi.org/10.31219/osf.io/2um67).⁸

- 2022 **Ballou N** et al.
Self-Determination Theory in HCI: Shaping a Research Agenda
CHI '22 Workshop Extended Abstracts, [10.1145/3491101.3503702](https://doi.org/10.1145/3491101.3503702).⁸
- 2022 Zendle D, Cairns P, Meyer R, Waters S & **Ballou N**.
Response to Xiao *et al.*: If Everything Is a Loot Box, Nothing Is.
Addiction, [10.1111/add.15976](https://doi.org/10.1111/add.15976).⁸

Grants

Principal Investigator

- 2024 **£25k** Effects of gaming reduction using actigraphy [↗](#) *Huo Family Foundation*
Status: Ongoing
- 2023 **£10k** Media use and mental health in identity construction [↗](#) *Uni of Oxford*
Status: Ongoing
- 2022 **£3k** For research on data donation and loot boxes [↗](#) *AFSG*
Status: Pokemon Go data donation platform created; manuscript in prep
- 2021 **£6k** For research on logging Xbox play [↗](#) *Centre for Future Health*
Status: Published in Technology, Mind & Behavior

Co-Investigator

- 2023 **£366k** Capturing the Digital Footprints of Video Game Play [ES/Y010736/1] [↗](#) *ESRC*
Status: Ongoing, platform available at <https://gameplay.science/>

Teaching

- 2025 Digital Social Research: Methods Core *Oxford Internet Institute*
Co-convenor • Postgraduate Module
- 2025 Myths & Misconceptions about Media and Mental Health *Lady Margaret Hall, Oxford*
Designer & Instructor • Undergraduate Seminar (2h) • **Satisfaction: 4.62/5**
- 2021–24 Peer Review and Scientific Incentives *QMUL Researcher Development*
Designer & Instructor • Postgraduate Workshop (6h) • **Satisfaction: 4.45/5**
- 2021–24 Statistical (Mal)practice *QMUL Researcher Development*
Designer & Instructor • Postgraduate Workshop (4h) • **Satisfaction: 4.74/5**

Supervision

Primary Supervisor

- 2024 Romina Karkalou - Play Time, Basic Psychological Needs and Well-being among Nintendo Switch Players *MSc Social Data Science, Oxford*
- 2023 Richard Delacruz - Player Personality Modelling for Dynamic Game Design *MSc Computer Games, QMUL*
- 2022 Jonathan Hong - The Effect of Characters and Rarity Systems on Motivation in Gacha Games *MSc Computer Games, QMUL*

Informal Supervision and Mentorship

- 2024– Thomas McGrath - Time Use and Displacement: A Literature Map and Simulation Modelling Approach *MRes Psychiatry, Oxford*
- 2023– Thomas Hakman - Gameplay matters: The relationship between in-game player behaviour, performance, and well-being *DPhil Social Data Science, Oxford*

External Examination

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| 2024 | Eleni Yoda Gill - The Role of Digital Play in the Development of Children's Moral Self-Concept | <i>MPhil Child Development Queensland Uni. of Technology</i> |
| 2024 | Tomasz Piasek - Virtual Escapes and Real-world Struggles: A Qualitative Inquiry into Internet Gaming Disorder | <i>MRes Psychology Uni. Bedfordshire</i> |

Service

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| 2025 | CHI Programme Committee Member | <i>CHI 2026, Games and Play Track</i> |
| 2023 | Local Network Lead | <i>UK Reproducibility Network</i> |
| 2022 | Papers Chair & Organizer | <i>IGGI Student Conference</i> |
| 2021–23 | Student Representative | <i>QMUL Scientific Misconduct Committee</i> |
| 2021–23 | Local Founder and Organizer | <i>ReproducibiliTea Journal Club</i> |

Invited Talks

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| 2025 | 5 Fun Facts From the New Generation of Games & Health Research | <i>GDC - Game Developer's Conference</i> |
| 2024 | Causal Theory Meets Digital Trace Data | <i>University of Southern California</i> |
| 2024 | Science Speakeasy: Mindgames | <i>Newcastle Life Science Centre</i> |
| 2024 | Scientific Misconduct on Steroids: Generative AI and Fraud | <i>QMUL Festival of Open Science in AI</i> |
| 2024 | 10 Ways Media Use Can Affect Mental Health, through a Causal Lens | <i>Barts & the London Psychiatry Society</i> |
| 2024 | Mechanisms of Gaming and Child Mental Health | <i>University of Hamamatsu</i> |
| 2023 | Three Paths Forward for Games and Mental Health Research | <i>University of York</i> |
| 2023 | Six Methods Reforms for the Social Sciences | <i>KU Leuven</i> |
| 2023 | Untangling the Effects of Games with Open Science | <i>University of York</i> |

Conference Presentations

The following are talks delivered at conferences that do not publish proceedings; all other conference presentations are detailed in the Publications section.

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|------|--|---|
| 2025 | Data Data Everywhere, but Not A Drop to Reuse: Why is Secondary Data Analysis Still So Rare? | <i>Society for the Improvement of Psychological Science</i> |
| 2024 | The Next Generation of Open Behavioral Data | <i>Society for the Improvement of Psychological Science</i> |
| 2023 | 5 Ways to Collect Digital Trace Data in Video Games | <i>International Conference Psychological Science</i> |
| 2022 | A Platform For Scalable and Accessible Games Research | <i>Video Games Research Framework Launch Conference</i> |
| 2022 | 10 Reasons The Research Ecosystem is Less Trustworthy Than You Think | <i>IGGI Conference</i> |

Media Features

My proudest media appearance is a [BBC Ideas](#) short video about my work and gaming history.

Work I've led or contributed to has been featured in written outlets such as [BBC Bitesize](#), [New Scientist](#) [1, 2], [Toronto Star](#), [The Guardian](#), [The South China Morning Post](#) [1, 2], [The Independent](#), [London Standard](#), [Irish Examiner](#), [Perspective Media](#), [GameStar](#), [CS4FN](#), [BGR](#), [Inside Hook](#), [PC Gamer](#), [PC Games Insider](#), [Science X](#), [Scientas NL](#), and [PsyPost](#) [1, 2, 3].

I've been interviewed for live news, video, and audio outlets including [Al Jazeera](#), [Children and Screens](#), [Pixel Parenting](#) [1, 2], [TRT World](#), the [Vol Breakfast Show](#), and [Play Aid](#).