

# Nick Ballou

Behavioural Data Science  Media Psychology  Digital Wellbeing

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## Academic Positions

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### 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

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### 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

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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.

- 2022 **Ballou N et al.**  
Self-Determination Theory in HCI: Shaping a Research Agenda  
*CHI '22 Workshop Extended Abstracts*, 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.15976.8

## Grants

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### Principal Investigator

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

### Co-Investigator

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

## Teaching

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

## Supervision

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### 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	MPhil Child Development Queensland Uni. of Technology
2024	Tomasz Piasek - Virtual Escapes and Real-world Struggles: A Qualitative Inquiry into Internet Gaming Disorder	MRes Psychology Uni. Bedfordshire

## Service

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

## Invited Talks

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

## Conference Presentations

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

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

## Media Features

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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](#).