# Matti Vuorre

# » Curriculum vitae

- Department of Social Psychology Tilburg University
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I am a psychological scientist at the Tilburg School of Social and Behavioral Sciences at Tilburg University, where I study cognition and well-being particularly in the context of digital environments using experimental, data science, and statistical methods.

# ACADEMIC POSITIONS

Assistant Professor, Department of Social Psychology, Tilburg University
Postdoctoral Researcher, Oxford Internet Institute, University of Oxford

• Postdoctoral Research Scientist, Department of Psychology, Columbia University

# **EDUCATION**

2023 - now

2020

2018 • *PhD*, Columbia University, USA

• MPhil, Columbia University, USA

• M.A, Columbia University, USA

• BSc (Hons), Victoria University of Wellington, New Zealand

2012 • BSc, Victoria University of Wellington, New Zealand

# RESEARCH FUNDING

- Capturing the Digital Footprints of Video Game Play. Economic and Social Research Council. (*Co-I with K. Magnusson and PI A. Przybylski. £263,696.*)
  - Understanding the associations between online video game play and well-being in a representative Dutch sample. Tilburg University. (*Co-PI with M. Klincewicz.* €8,577.)
  - How does digitalization associate with brain aging? Tilburg University. (Co-PI with S. M. Kia. €12,000.)
- Does the nose know? Validating immersive multisensory VR food environments to study eating behaviour. Tilburg University. (*Co-I with PI R. de Vries.* €16,344.)
- Understanding video game play and mental health. Economic and Social Research Council. (*Co-I with Co-I K. Magnusson and PI A. Przybylski. £935,050.*)
- The association between video game play and cognition. University of Oxford. (*PI.*  $\pounds 10,000$ )

# Honors & Awards

- Leo Rubinstein Endowed Fellowship (Columbia University)
  - Graduate Student Travel Award (Psychonomic Society)
- Leo Rubinstein Endowed Fellowship (Columbia University)
  - Edward E. Smith Memorial Award in Cognitive Neuroscience (Columbia University)
  - Best Student Poster Award (Association for the Scientific Study of Consciousness)
- 2013 Dean's Fellowship (Columbia University),
- Postgraduate Research Scholarship (Victoria University of Wellington)
  - School of Psychology Graduate Prize (Victoria University of Wellington)
  - Victoria University Graduate Award (Victoria University of Wellington)

# **TEACHING**

### Courses

- 2024 now Experimental research (Tilburg University)
- 2023 now Consumer Analytics using Big Data (Tilburg University)
  - Experiments for Social Data Science (University of Oxford)

### Workshops

- Bayesian regression modelling (University of Basel; https://vuorre.com/workshop/)
- 2023 Data visualization workshop (Tilburg University)
- Bayesian regression modelling with brms (University of Zürich; https://vuorre.com/brms-workshop/)
- Bayesian modelling with the Stan probabilistic programming language (Columbia University; https://github.com/mvuorre/ulam)
- Hierarchical modelling of change over time (University of Aberdeen)
- Within-subject mediation analysis for experimental data in cognitive psychology and neuroscience (Rutgers University; https://github.com/mvuorre/2017-rutgers-mediation)

#### TEACHING ASSISTANTSHIPS

- Statistics for Behavioral Scientists (Columbia University)
- Introduction to Statistical Modeling in Psychology (Columbia University)
- Analysis of Change (Columbia University)
- Experimental Psychology: Human Behavior (Columbia University)
- The Science of Psychology (Columbia University)
- Visual Perception (Victoria University of Wellington)
- Introduction to Psychology (Victoria University of Wellington)

### Service to the Profession

- Member of the Tilburg Young Academy
- TSB Faculty ambassador to the Tilburg Open Science Community
- Recommender at Peer Community In Registered Reports
- Editor for the Instagram Data Access Pilot for Well-being Research

I have acted as a peer reviewer for Advances in Methods and Practices in Psychological Science; Acta Psychologica; Attention, Perception, & Psychophysics; British Journal of Mathematical and Statistical Psychology; Communication Research; International Journal of Psychology; John Templeton Foundation; Journal of Adolescence; Journal of Consciousness Studies; Journal of the Experimental Analysis of Behavior; Journal of Experimental Psychology: General; Nature Human Behaviour; Peer Community In Registered Reports; Psychological Science; Psychology of Consciousness; and Royal Society Open Science. I always sign my reviews.

# Publications & Academic Contributions

See Zotero or Google Scholar for the most up-to-date list of my publications.

### **PUBLICATIONS**

- 1. Vries, Laan, Boesveldt, Vuorre, Leeuwen, Verboon, Masterson & Klippel (2025). Smell-e Technology: Bridging the gap between virtual and real-life food responses using an immersive multisensory VR food environment. OSF. https://doi.org/10.31234/osf.io/6jwyr\_v1
- 2. Vuorre (2025). *Estimating Signal Detection Models with regression using the brms R package*. OSF. https://doi.org/10.31234/osf.io/vtfc3 v1
- 3. Ballou, Vuorre, Hakman, Magnusson & Przybylski (2025). *Perceived value of video games, but not hours played, predicts mental well-being in casual adult Nintendo players*. Royal Society Open Science. https://doi.org/10.1098/rsos.241174
- 4. Mansfield, Ghai, Hakman, Ballou, Vuorre & Przybylski (2025). From social media to artificial intelligence: improving research on digital harms in youth. The Lancet Child & Adolescent Health. https://doi.org/10.1016/S2352-4642(24)00332-8
- 5. Leeuwen, Jaeger, Axelsson, Becker, Hansson, Lasselin, Lekander, Tybur & Vuorre (2024). The smoke-detector principle of pathogen avoidance: A test of how the behavioral immune system gives rise to prejudice (stage 1 registered report) OSF. https://doi.org/10.31234/osf.io/e874s
- 6. Vuorre, Kay & Bolger (2024). *Communicating causal effect heterogeneity*. OSF. https://doi.org/10.31234/osf.io/mwg4f
- 7. Vuorre, Ballou, Hakman, Magnusson & Przybylski (2024). *Affective Uplift During Video Game Play: A Naturalistic Case Study*. ACM Games. https://doi.org/10.1145/3659464
- 8. Johannes, Masur, Vuorre & Przybylski (2024). *How should we investigate variation in the relation between social media and well-being?* Meta-Psychology. https://doi.org/https://doi.org/10.15626/MP.2022.3322
- 9. Ballou, Hakman, Vuorre, Magnusson & Przybylski (2024). How do video games affect mental health? A narrative review of 13 proposed mechanisms. OSF. https://doi.org/10.31234/osf.io/q2kxg
- 10. Vuorre & Przybylski (2024). *A Multiverse Analysis of the Associations Between Internet Use and Well-Being*. Technology, Mind, and Behavior. https://doi.org/10.1037/tmb 0000127

- 11. Zloteanu & Vuorre (2024). A Tutorial for Deception Detection Analysis or: How I Learned to Stop Aggregating Veracity Judgments and Embraced Signal Detection Theory Mixed Models. Journal of Nonverbal Behavior. https://doi.org/10.1007/s10919-024-00456-x
- 12. Metcalfe, Xu, Vuorre, Siegler, Wiliam & Bjork (2024). *Learning from errors versus explicit instruction in preparation for a test that counts*. British Journal of Educational Psychology. https://doi.org/10.1111/bjep.12651
- 13. Weinstein, Vuorre, Adams & Nguyen (2023). *Balance between solitude and socializing:* everyday solitude time both benefits and harms well-being. Scientific Reports. https://doi.org/10.1038/s41598-023-44507-7
- 14. Miller, Mills, Vuorre, Orben & Przybylski (2023). *Impact of digital screen media activity on functional brain organization in late childhood: Evidence from the ABCD study.* Cortex. https://doi.org/10.1016/j.cortex.2023.09.009
- 15. Vuorre & Przybylski (2023). *Global Well-Being and Mental Health in the Internet Age*. Clinical Psychological Science. https://doi.org/10.1177/21677026231207791
- 16. Vuorre, Magnusson, Johannes, Butlin & Przybylski (2023). *An intensive longitudinal dataset of in-game player behaviour and well-being in PowerWash Simulator*. Scientific Data. https://doi.org/10.1038/s41597-023-02530-3
- 17. Vuorre & Przybylski (2023). *Estimating the association between Facebook adoption and well-being in 72 countries.* Royal Society Open Science. https://doi.org/10.1098/rsos. 221451
- 18. Syed Sheriff, Vuorre, Riga, Przybylski, Adams, Harmer & Geddes (2022). A coproduced online cultural experience compared to a typical museum website for mental health in people aged 16–24: A proof-of-principle randomised controlled trial. Australian & New Zealand Journal of Psychiatry. https://doi.org/10.1177/00048674221115648
- 19. Vuorre, Johannes, Magnusson & Przybylski (2022). *Time spent playing video games is unlikely to impact well-being*. Royal Society Open Science. https://doi.org/10.1098/rsos.220411
- 20. Vuorre, Johannes & Przybylski (2022). *Three objections to a novel paradigm in social media effects research*. OSF. https://doi.org/10.31234/osf.io/dpuya
- 21. Johannes, Vuorre, Magnusson & Przybylski (2022). *Time Spent Playing Two Online Shooters Has No Measurable Effect on Aggressive Affect*. Collabra: Psychology. https://doi.org/10.1525/collabra.34606
- 22. Metcalfe, Vuorre, Towner & Eich (2022). *Curiosity: The effects of feedback and confidence on the desire to know.* Journal of Experimental Psychology: General. https://doi.org/10.1037/xge0001284
- 23. Vuorre, Zendle, Petrovskaya, Ballou & Przybylski (2021). *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. https://doi.org/10.1037/tmb0000048

- 24. Metcalfe, Kennedy-Pyers & Vuorre (2021). *Curiosity and the desire for agency: wait, wait ... don't tell me!* Cognitive Research: Principles and Implications. https://doi.org/10.1186/s41235-021-00330-0
- 25. Vuorre, Orben & Przybylski (2021). There Is No Evidence That Associations Between Adolescents' Digital Technology Engagement and Mental Health Problems Have Increased. Clinical Psychological Science. https://doi.org/10.1177/2167702621994549
- 26. Johannes, Vuorre & Przybylski (2021). *Video game play is positively correlated with well-being*. Royal Society Open Science. https://doi.org/10.1098/rsos.202049
- 27. Vuorre & Metcalfe (2021). *Measures of relative metacognitive accuracy are confounded with task performance in tasks that permit guessing*. Metacognition and Learning. https://doi.org/10.1007/s11409-020-09257-1
- 28. Vuorre & Crump (2020). *Sharing and organizing research products as R packages*. Behavior Research Methods. https://doi.org/10.3758/s13428-020-01436-x
- 29. Metcalfe, Brezler, McNamara, Maletta & Vuorre (2019). *Memory, stress, and the hippocampal hypothesis: Firefighters' recollections of the fireground.* Hippocampus. https://doi.org/10.1002/hipo.23128
- 30. Bürkner & Vuorre (2019). *Ordinal Regression Models in Psychology: A Tutorial*. Advances in Methods and Practices in Psychological Science. https://doi.org/10.1177/2515245918823199
- 31. Bloom, Friedman, Xu, Vuorre & Metcalfe (2018). *Tip-of-the-tongue states predict enhanced feedback processing and subsequent memory.* Consciousness and Cognition. https://doi.org/10.1016/j.concog.2018.05.010
- 32. Vuorre & Curley (2018). *Curating Research Assets: A Tutorial on the Git Version Control System.* Advances in Methods and Practices in Psychological Science. https://doi.org/10.1177/2515245918754826
- 33. Vuorre (2018). *Using Visual Illusions to Examine Action-Related Perceptual Changes*. Columbia University. https://academiccommons.columbia.edu/catalog/ac:73n5tb2rdf
- 34. Chapman, Colvin, Vuorre, Cocchini, Metcalfe, Huey & Cosentino (2018). *Cross domain self-monitoring in anosognosia for memory loss in Alzheimer's disease*. Cortex. https://doi.org/10.1016/j.cortex.2018.01.019
- 35. Heino, Vuorre & Hankonen (2018). *Bayesian evaluation of behavior change interventions: a brief introduction and a practical example.* Health Psychology and Behavioral Medicine. https://doi.org/10.1080/21642850.2018.1428102
- 36. Vuorre & Bolger (2017). Within-subject mediation analysis for experimental data in cognitive psychology and neuroscience. Behavior Research Methods. https://doi.org/10.3758/s13428-017-0980-9
- 37. Vuorre & Metcalfe (2017). *Voluntary action alters the perception of visual illusions*. Attention, Perception, & Psychophysics. https://doi.org/10.3758/s13414-017-1321-x
- 38. Sidarus, Vuorre & Haggard (2017). *Integrating prospective and retrospective cues to the sense of agency: a multi-study investigation*. Neuroscience of Consciousness. https://doi.org/10.1093/nc/nix012
- 39. Sidarus, Vuorre & Haggard (2017). *How action selection influences the sense of agency: An ERP study.* NeuroImage. https://doi.org/10.1016/j.neuroimage.2017.02.015

- 40. Sidarus, Vuorre, Metcalfe & Haggard (2017). *Investigating the Prospective Sense of Agency: Effects of Processing Fluency, Stimulus Ambiguity, and Response Conflict.* Frontiers in Psychology. https://doi.org/10.3389/fpsyg.2017.00545
- 41. Vuorre (2017). *On Time, Causation, and the Sense of Agency*. Journal of Consciousness Studies. https://www.ingentaconnect.com/content/imp/jcs/2017/00000024/f0020003/art00011
- 42. Vuorre & Metcalfe (2016). *The relation between the sense of agency and the experience of flow.* Consciousness and Cognition. https://doi.org/10.1016/j.concog.2016.06.001
- 43. Michael, Newman, Vuorre, Cumming & Garry (2013). *On the (non)persuasive power of a brain image*. Psychonomic Bulletin & Review. https://doi.org/10.3758/s13423-013-0391-6

#### **PRESENTATIONS**

- 1. Vuorre (2025). *Collaborative science in the age of software*. Princeton University. https://psych.princeton.edu/news-events/2025/matti-vuorre-assistant-professortilburg-university
- 2. Vuorre (2025). *Digital risks and harms: From social media to artificial intelligence.* Presented at Office for Product Safety and Standards, London, UK.
- 3. Vuorre (2025). *Understanding psychological heterogeneity with Bayesian hierarchical models*. Tilburg, NL.
- 4. Vuorre (2024). *Communicating causal effect heterogeneity*. University of Illinois at Urbana-Champaign (Remote). https://lautsee.website/victorhcervantes/uiuc-quant-brownbag/abstracts/vuorre-2024.html
- 5. Vuorre (2024). *Understanding psychological heterogeneity with Bayesian hierarchical models using the brms R package*. Presented at StanCon, Oxford, UK. https://www.youtube.com/watch?v=qe7oM9pJpiI&list=PLCrWEzJgSUqzNzh6mjWsWUu-lSK59VXP6&index=7
- 6. Vuorre (2024). Investigating video game player behavior and well-being. Tilburg, NL.
- 7. Vuorre (2024). *Video games and well-being*. Presented at Gaming Disorder Global Seminar, Seoul, SK.
- 8. Vuorre (2024). *Big data, small transparency: Limits to understanding, and addressing effectively, concerning behaviors in the online era.* Presented at International Behavioural Public Policy Conference, Cambridge, UK. https://www.ibppa.org/ibppc-2024
- 9. Vuorre (2024). Internet technology and well-being. Amsterdam, NL.
- 10. Vuorre (2023). What can psychological science tell us about video games and their effects. Presented at The Missing Link, Tilburg, NL. https://youtu.be/29pJF9KUP-0
- 11. Vuorre (2023). *Understanding the roles of digital technologies in psychological functioning*. Presented at Tilburg Experience Sampling Center, Tilburg, NL.
- 12. Vuorre (2023). *Intensive longitudinal dataset of video game play, well-being, and motivations: A case study of PowerWash Simulator.* Presented at International Convention of Psychological Science, Brussels.

- 13. Vuorre (2022). *Time spent playing video games is unlikely to impact well-being*. Presented at International Communication Association, Paris.
- 14. Vuorre (2018). Within-subject mediation analysis for experimental data in cognitive psychology and neuroscience. Columbia University.
- 15. Vuorre (2017). *A meta-analytic review of agency cues*. Presented at European Society for Cognitive Psychology, Potsdam.
- 16. Vuorre (2016). *The pragmatist's guide to studying free will.* Presented at Science of Consciousness, Tucson. https://youtu.be/GcSmbzqWX7Q
- 17. Vuorre (2016). *Voluntary actions cause a temporal rate-shift in visual awareness: Evidence from visual illusions.* Presented at Science of Consciousness, Tucson.
- 18. Vuorre (2015). *Voluntary action and time perception*. Presented at Toward a Science of Consciousness, Helsinki, Finland.

### Software

- 1. Vuorre (2025). PDF-Direct (JavaScript, v1.2). https://github.com/mvuorre/pdf-direct
- 2. Vuorre (2024). *bmlm: Bayesian multilevel mediation* (R, v1.3.15). https://github.com/mvuorre/bmlm

### Public Engagement & Media

- Masnick (2024). Yet Another Study Finds That Internet Usage Is Correlated With GREATER Wellbeing, Not Less. Techdirt. https://www.techdirt.com/2024/05/17/yetanother-study-finds-that-internet-usage-is-correlated-with-greater-wellbeing-notless/
- 2. Holcombe (2024). *Internet access is linked to higher well-being, new global study reveals.* CNN. https://www.cnn.com/2024/05/15/health/internet-greater-well-being-study-wellness/index.html
- 3. Storås (2023). *Teknologia ei tuhonnut kansan psyykettä*. Helsingin Sanomat. https://www.hs.fi/visio/art-2000010069351.html
- 4. SVT Nyheter (2023). *Ny studie: Inga bevis för att internet skadar vårt välmående*. SVT Nyheter. https://www.svt.se/nyheter/inrikes/ny-studie-inga-bevis-for-att-internet-skadar-vart-valmaende--x52qwt
- 5. BBC (2021). *Is technology harmful to youngsters?* BBC Learning English. https://www.bbc.co.uk//learningenglish/english/features/6-minute-english/ep-210906
- 6. BBC (2021). *Tech does not impact teenage mental health.* BBC. https://www.bbc.co.uk/programmes/w3ct1lry

### OTHER WRITING

- 1. Vuorre (2019). *How to analyze visual analog (slider) scale data?* Matti's blog. https://vuorre.com/posts/2019-02-18-analyze-analog-scale-ratings-with-zero-one-inflated-beta-models/
- 2. Vuorre (2016). *Introduction to Data Analysis using R. JEPS Bulletin.* https://blog.efpsa.org/2016/12/05/introduction-to-data-analysis-using-r/

3. Vuorre (2014). *What Your Name Says About How Believable You Are.* Scientific American. https://www.scientificamerican.com/article/what-your-name-says-about-how-believable-you-are/