

Curriculum Vitae

Dr. Philip Millroth
Associate Professor (Docent)
Department of Psychology
Uppsala University, Uppsala, Sweden

+46 (0)18 471 72 77
+46 (0)76 244 84 04
philip.millroth@psyk.uu.se
www.researchgate.net/profile/Philip_Millroth



- The thoroughgoing theme of my research is to show how basic cognitive mechanisms (e.g., memory processes, information processing) and individual moderators of these are instrumental to understanding complex phenomena such as decision-making behavior.
- With the help of my growing academic network, the objective of my ongoing and future research endeavors is to focus especially on how insights and methods from cognitive psychology can be used to advance our understanding of clinical aspects (e.g., clinical judgment, gambling and anxiety disorders).
- As a teacher, I am responsible for the undergraduate courses in Cognitive Psychology. Here, I have designed the lectures and courses to emphasize the need for connecting basic theory with applied research.

Current Position

- **Department of Psychology** Uppsala University, Sweden
Associate Professor from 2023-05

Previous Positions

- **Department of Psychology** Uppsala University, Sweden
Researcher Honorary: Karolinska Institutet, Sweden
2021-01 – 2023-05
- **Department of Psychology** Uppsala University, Sweden
Post-doc Researcher 2020-05 – 2020-12
- **Department of Psychology** Uppsala University, Sweden
PhD Student 2014-05 – 2020-05
- **Department of Psychology** Uppsala University, Sweden
Lab Manager / Research Assistant 2012 – 2014

Degrees & Qualifications

- **Docent**
Uppsala University, 2022
- **PhD, Cognitive Psychology**
Uppsala University, 2020
 - Thesis title: *Integrating Probability- and Value Information in Judgment and Decision-Making under Risk: Cognitive Processes, Competence, and Performance* ([online access](#))
 - Supervisor: Prof. Peter Juslin, Co-Supervisor: Dr. Håkan Nilsson
 - Faculty examiner: Prof. Bettina von Helversen, University of Bremen
- **MSc and BSc. Psychology**
Uppsala University, 2013 / 2011

In preparation (under review or soon to be submitted):

- **Millroth, P.**, Zilker, V., & Pachur, T. *How numeracy shapes decision-making under risk: An individual-participant data meta-analysis of >400,000 unique decisions from >15,000 participants.*
- **Millroth, P.**, & Agren, T. *Predicting decision-making behavior from arousal responses across temporal phases.*
- **Millroth, P.**, & Collsiö, A. *Increasing diagnostic quality in mental health: Definitions of disorders need to be cognitively tractable.*
- Asp, M., Abed, M., & **Millroth, P.** *General risk preference comes up short when predicting risk-taking frequency.*
- Torstensson, A., Algeroth von Thiele, V., & **Millroth P.** *To become a parent or not: The role of personality and trait-like dispositions towards uncertainty in the underpinning thought processes.*
- Szaszi, B., Clelland, H., Kovacs, M., [...], **Millroth, P.**, [...], & Nosek, B. *Investigating the analytical robustness of the social and behavioural sciences*

Peer-reviewed journal articles:

1. Sundh, J., **Millroth, P.**, Collsiö, A., & Juslin, P. (in press). Enriching psychological research by exploring the source and nature of noise. *Perspectives in Psychological Science*.
2. Pettersson, K., Millroth, P., Giannotta, F., Liedgren, P., Lyon, A.R., Hasson, H., & von Thiele Schwarz, U. (in press). Outcome preferences in fidelity-adaptation scenarios across evidence-based parenting programs: A discrete choice experiment. *Implementation Science*.
- Millroth, P.** (2023). A Brunswikian inspired taxonomical approach to risky decision making. *The Brunswik Society Newsletter*, 38, 22-26.
3. Ramineni, V., **Millroth, P.**, ...& Holmes, E.A. (2023). Treating intrusive memories after trauma in healthcare workers: a Bayesian adaptive randomised trial developing an imagery-competing task intervention. *Molecular Psychiatry*, 1-10, <https://doi.org/10.1038/s41380-023-02062-7>
4. The Forecasting Collaborative: Grossman, I., ...**Millroth, P.**, ...& Wilkening, T. (2023). Insights into accuracy of social scientists' forecasts of societal change. *Nature Human Behaviour*. <https://doi.org/10.1038/s41562-022-01517-1>
5. Delios, A., ...**Generalizability Tests Forecasting Collaboration**, & Uhlmann, E. L. (2022). Examining the generalizability of research findings from archival data. *Proceedings of the National Academy of Sciences*, 119(30), <https://doi.org/10.1073/pnas.2120377119>.
6. **Millroth, P.** (2021). Toward a richer understanding of human cognition: Unleashing the full potential of the concurrent information-processing paradigm. *New Ideas in Psychology*, 63(100873), 1-10: <https://doi.org/10.1016/j.newideapsych.2021.100873>
7. **Millroth, P.**, & Frey, R. (2021). Fear and Anxiety in the Face of COVID-19: Prominent Roles of Negative Dispositions Towards Risk and Uncertainty. *Journal of Anxiety Disorders*, 83(102454), 1-8: <https://doi.org/10.1016/j.janxdis.2021.102454>
8. **Millroth, P.**, Collsiö, A., & Juslin, P. (2021). Cognitiva speciebus: Towards a Linnean approach to cognition. *Trends in Cognitive Sciences*, 25(3), 173-176: <https://doi.org/10.1016/j.tics.2020.12.005>
9. Sundh, J., Collsiö, A., **Millroth, P.**, & Juslin, P. (2021). Precise/not precise (PNP): A Brunswikian model that uses judgment error distributions to identify cognitive processes. *Psychonomic Bulletin & Review*, 28(no volume), 1-23: <https://doi.org/10.3758/s13423-020-01805-9>
10. Tierney, W., Hardy, J. H., III., Ebersole, C., Viganola, D., Clemente, E.,...& **Work Morality Forecasting Collaboration**, & Uhlmann, E. L. (2021). A creative destruction approach to replication: Implicit work and sex morality across cultures. *Journal of Experimental Social Psychology*, 93, 104060: <https://doi.org/10.1016/j.jesp.2020.104060>

11. **Millroth, P.**, Juslin, P., Winman, A., Nilsson, H., & Lindskog, M. (2020). Preference or ability: Exploring the relations between risk preference, personality, and cognitive abilities. *Journal of Behavioral Decision Making*, 33(4), 477-491: <https://doi.org/10.1002/bdm.2171>
12. **Millroth, P.**, Nilsson, H., & Juslin, P. (2019). The decision paradoxes motivating Prospect Theory: The prevalence of the paradoxes increases with numerical ability. *Judgment and Decision Making*, 14(4), 513-533: <http://journal.sjdm.org/18/18515/jdm18515.html>
13. Agren, T., **Millroth, P.**, Andersson, P., Ridzén, M., & Björkstrand, J. (2019). Detailed analysis of skin conductance responses during a gambling task: Decision, anticipation, and outcomes. *Psychophysiology*, 56(6), 1-10: <https://doi.org/10.1111/psyp.13338>
14. **Millroth, P.**, Guath, M., & Juslin, P. (2019). Memory and decision making: Effects of sequential presentation of probabilities and outcomes in risky prospects. *Journal of Experimental Psychology: General*, 148(2), 304-324: <https://doi.org/10.1037/xge0000438>
15. **Millroth, P.**, Nilsson, H., & Juslin, P. (2018). Examining the Integrity of Evaluations of Risky Prospects Using a Single-Stimuli Design. *Decision*, 5(4), 362-377: <https://psycnet.apa.org/doi/10.1037/dec0000085>
16. **Millroth, P.**, Juslin, P., Eriksson, E., & Agren, T. (2017). Disentangling the effects of serotonin on risk perception: S-carriers of 5-HTTLPR are primarily concerned with the magnitude of the outcomes, not the uncertainty. *Behavioral Neuroscience*, 131(5), 421-427: <https://doi.org/10.1037/bne0000209>
17. Juslin, P., Elwin, E., Guath, M., **Millroth, P.**, & Nilsson, H. (2016). Sequential and myopic: On the use of feedback to balance cost and utility in a simulated electricity efficiency task. *Journal of Cognitive Psychology*, 28(1), 106-128: <https://doi.org/10.1080/20445911.2015.1095192>
18. Guath, M., **Millroth, P.**, Juslin, P., & Elwin, E. (2015). Optimizing electricity consumption: A case of function learning. *Journal of Experimental Psychology: Applied*, 21(4), 326-341: <https://doi.org/10.1037/xap0000056>
19. **Millroth, P.**, & Juslin, P. (2015). Prospect evaluation as a function of numeracy and probability denominator. *Cognition*, 138(no volume), 1-9: <https://doi.org/10.1016/j.cognition.2015.01.014>

Other published research (prediction studies, commentaries, non-peer-reviewed work, and letters):

- **Millroth, P.** (2023). A ChatGPT-generated list of risky real-life situations. *PsyArXiv preprint*. <https://osf.io/preprints/psyarxiv/hs2n7/download>
- **Millroth, P.**, Nilsson, H., & Juslin, P. (2020). Replications will not help: The paradoxes motivating Prospect Theory still don't tell us much about human risk-preferences [blog post proposed by editors of Nature Human Behavior]: <https://socialsciences.nature.com/posts/replications-will-not-help-the-paradoxes-motivating-prospect-theory-still-don-t-tell-us-much-about-human-risk-preferences>
- Sundh, J., Juslin, P., & **Millroth, P.** (2019). Appreciation for independence: does adaptation to stochastic dependence imply thinking according to stochastic principles? In Sundh, J. (thesis.), *The cognitive basis of joint probability judgments: processes, ecology, and adaption*. Uppsala: Acta Universitatis Upsaliensis: [online access](#)
- **Millroth, P.** (2017). Descriptive statistics and Bayesian hypothesis testing show that the intervention enhances only geometric sensitivity: Comment on Dillon et al. (2017). Reviewed by Editors of Science Magazine: <https://www.science.org/doi/10.1126/comment.701006/full/>

Grants & Awards

- The prize for younger researchers in psychology, established by the National Committee for Psychology at the Royal Swedish Academy of Sciences (2023), including symposium grant by Riksbankens Jubileumsfond.
- Post-doc scholarship: The Ryoichi Sasakawa Young Leaders Fellowship Fund covering 80% of a full-time

position (2021-2024).

- Involved in the conceptualizations and writing of the following accepted grant proposals:
 - Identifying factors limiting the efficacy of a “cognitive vaccine” against intrusive memories after psychological trauma using objective physiological biomarkers. (2022): \$1.75M. PI: Holmes, E.
 - Endogeneous derivation of random noise in cognitive models (2019). SEK 4.45 Million. PI: Juslin, P
 - Explorations of the integration function in risky decision making (2016). SEK 4.45 Million. PI: Juslin, P.

Ongoing Collaborators Outside of Uppsala University

- Prof. Sandeep Mishra, University of Guelph, Canada.
- Prof. Thorsten Pachur, Max Planck Institute for Human Development, Germany
- Dr. Veronika Zilker, Max Planck Institute for Human Development, Germany.
- Dr. Renato Frey, University of Zürich, Switzerland.
- Kristoffer Pettersson, Mälardalens Högskola, Sweden.
- Thomas Ågren, Gävle Universitet, Sweden.
- August Collsiöö, Linköping Universitet, Sweden.
- Prof. Daniel Västfjäll, Linköping Universitet, Sweden.

Conference Presentations & Talks

1. *Emotional prospective mental imagery and decision-making under risk* (2024). Presented at the Conference for Mental Imagery, Emotions, and Decision Making, National Science Center, Poland.
2. *Going from haunting images of the past to positive images of the future: Interdisciplinary perspectives on emotion, memory and mental imagery* (2023). Invited panelist at a mental-imagery focused symposium organized by the Swedish Collegium for Advanced Studies.
3. *A taxonomical approach to decision-making under risk* (2023). Keynote speaker for “Cognitive perspectives on understanding human decision-making in situations involving risk and uncertainty”, a symposium hosted by the National Committee for Psychology at the Royal Swedish Academy of Sciences.
4. *Integrative analysis of the cognitive triangle in decision-making and anxiety: effects of learning, preferences, and sampling* (2022). Conference presentation at the annual meeting of convention for the American Psychological Society, Chicago, USA.
5. *Data management when conducting meta-analyses using individual participant data* (2022). Invited lecture at the SWPS University of Social Sciences and Humanities, Warzaw, Poland.
6. *The cognitiva speciebus project: A Linnaean mapping of decision-making* (2021). Invited lecture at the Warwick Business School, Warwick
7. *Concurrent information-processing in human cognition* (2021). Conference presentation at the annual meeting of Swedish Cognitive Science Society.
8. *Predicting naturalistic risk-taking* (2021). Conference presentation the bi-annual Subjective Probability, Utility, and Decision Making (SPUDM) conference hosted in Warwick.
9. *Mapping the cognitive foundations of economic decisions: The roles of hard-wired information processing constraints and domain-specific knowledge* (2020). Invited lecture at the Max Planck Institute for

Human Development in Berlin.

10. *Correct and incorrect assumptions about human risk preferences* (2020). Invited workshop at Högskolan Dalarna.
11. *The decision paradoxes motivating Prospect Theory: The prevalence of the paradoxes increases with numerical ability* (2019). Conference presentation at the Subjective Probability, Utility, and Decision Making (SPUDM) conference in Amsterdam.
12. *The decision paradoxes motivating Prospect Theory: The prevalence of the paradoxes increases with numerical ability* (2019). Invited lecture at Linköping University.
13. *The decision paradoxes motivating Prospect Theory: The prevalence of the paradoxes increases with numerical ability*. Invited lecture at Stockholm School of Economics.
14. *Cognitive psychology and the field of AI: Past, present, and future* (2019). Invited lecture at the computer science department at Uppsala University.
15. *Examining the integrity of the integration function for evaluations of risky prospects* (2017). Conference presentation at the Conference presentation at the Subjective Probability, Utility, and Decision Making (SPUDM) conference hosted in Haifa.
16. *Sequential presentation of probability and value for risky prospects* (2015). Conference poster at the Subjective Probability, Utility, and Decision Making (SPUDM) conference hosted in Budapest
17. *Rank-dependent integration of probability and value*. Conference presentation at the Subjective Probability, Utility, and Decision Making (SPUDM) conference hosted in Budapest.
18. *Prospect evaluation as a function of numeracy and denominator neglect* (2014). Conference presentation at the Society for Judgment and Decision Making conference hosted in Long Beach, United States.

Current Teaching

- Cognitive Psychology (Undergraduate level)
Course Leader and Teacher for Cognition A, Cognition B, and Cognition & Learning.
- Cognitive Psychology (Masters and graduate level)
Teacher
- Assistant Doctoral Supervisor
Nesibe Musti – Main supervisor: Joakim Sundh.
- Undergraduate- and Master Theses
Supervisor and Co-Supervisor
- Research Methods (Doctoral, masters, and graduate level)
Teacher

Additional Skills

- Good Clinical Practice certification
- Statistical modeling: R, MatLab, JASP, SPSS, Statistica
- Broad methodological repertoire: experimental design, meta-analyses, network analysis, cognitive modeling, large-language models, Bayesian hypothesis testing.
- Data analysis on a large variety of study types (experiments, intervention studies, observation studies, “big-data”).