Postdoctoral Fellow, Max Planck Institute for Human Development, Berlin, Germany.

Indrajeet Patil



Employment

- Postdoctoral Fellow, Max-Planck Institute for Human Development, Berlin, Germany, 2019-. Advisors: Iyad Rahwan
- Postdoctoral Fellow, Department of Psychology, Harvard University, Cambridge, USA, 2017-2019. Advisors: Mina Cikara and Fiery Cushman
- Visiting Researcher, Scuola Internazionale Superiore di Studi Avanzati (SISSA), Trieste, Italy, 2016.

Education

- Doctor of Philosophy (Neuroscience), SISSA, Trieste, Italy, 2011-2015 (summa cum laude).

 Thesis: A multimodal investigation of moral decision making in harmful contexts (Advisor: Giorgia Silani).
- Master of Science (Physics), Department of Physics, University of Pune, India, 2008-2010 (GPA: 4.2/6). Thesis: Effect of hypergravity on amylase and total protein content in germinating rice seeds.
- Bachelor of Science (Physics), Fergusson College, India, 2005-2008 (Score: 83%).

 Thesis: Theoretical studies of static friction at atomic scale for unlubricated BCC solids.

 Satish Bhide Prize for the Best Undergraduate Thesis

Languages

Marathi (C2), Hindi (C2), English (C2), German (B2), Italian (A2)

Publications/Preprints

(*equal contribution, Citation count: 1033, h-index: 14, i10-index: 17, Open materials: 13/13 publications)

- Patil, I. (2021). Visualizations with statistical details: The 'ggstatsplot' approach. *PsyArXiv*. doi:10.31234/osf.io/p7mku
- Patil, I. (2021). statsExpressions: R Package for Tidy Dataframes and Expressions with Statistical Details. PsyArXiv. doi:10.31234/osf.io/ntbvy
- Ahlmann-Eltze, C., & Patil, I. (2021). ggsignif: R Package for Displaying Significance Brackets for 'ggplot2'. *PsyArxiv*. doi:10.31234/osf.io/7awm6
- Patil, I., & Tremoliere, B. (2021). I think, therefore I forgive: The role of reasoning in forgiving accidental harms. *PsyArXiv*. doi:10.31234/osf.io/8gjth
- Lüdecke, D., Ben-Shachar, M. S., Patil, I., Waggoner, P., & Makowski, D. (2021). performance: An R Package for Assessment, Comparison and Testing of Statistical Models. *Journal of Open Source Software*, 6(60), 3139. doi:10.21105/joss.03139
- Patil, I.*, Zucchelli, M. M.*, Kool, W., Campbell, S., Fornasier, F., Calò, M., Silani, G., Cikara, M., & Cushman, F. A. (2021). Reasoning supports utilitarian resolutions to moral dilemmas across diverse measures. *Journal of Personality and Social Psychology*, 120(2), 443–460.. doi:10.1037/pspp0000281
- Dhaliwal, N. A.*, Patil, I.*, & Cushman, F. A. (2021). Reputational and cooperative benefits of third-party compensation. *Organizational Behavior and Human Decision Processes*, 164, 27-51. doi:10.17605/0SF.IO/C3BSJ

- Patil, I.*, Larsen, E.*, Kichic, R., & Gleichgerrcht, E. (2020). Moral cognition about harm in anxiety disorders. *Psychological Reports*. doi:10.1177/0033294120964134
- Lüdecke, D., Ben-Shachar, M. S., Patil, I., & Makowski, D. (2020). Extracting, Computing and Exploring the Parameters of Statistical Models using R. *Journal of Open Source Software*, 5(51), 2445. https://doi.org/10.21105/joss.02445
- Makowski, D., Ben-Shachar, M. S., Patil, I., & Lüdecke, D. (2020). Methods and Algorithms for Correlation Analysis in R. *Journal of Open Source Software*, 5(51), 2306. https://doi.org/10.21105/joss.02306
- Patil, I., Zanon, M.*, Novembre, G.*, Zangrando, N., Chittaro, L., & Silani, G. (2018). Neuroanatomical basis of concern-based altruism in virtual environment. *Neuropsychologia*, 116, 34-43. doi:10.1016/j.neuropsychologia.2017.02.015
- Patil, I., Calò, M., Fornasier, F., Cushman, F. A.*, & Silani, G.* (2017). The behavioral and neural basis of empathic blame. *Scientific Reports*, 7:5200. doi:10.1038/s41598-017-05299-9
- Patil, I., Calò, M.*, Fornasier, F.*, Young, L., & Silani, G. (2017). Neuroanatomical correlates of forgiving unintentional harms. *Scientific Reports*, 7:45967. doi:10.1038/srep45967
- Patil, I., Young, L., Sinay, V., & Gleichgerrcht, E. (2017). Elevated moral condemnation of third-party violations in multiple sclerosis patients. *Social Neuroscience*, 12(3), 308-329. doi:10.1080/17470919.2016.1175380
- Patil, I.*, Melsbach, J.*, Hennig-Fast, K., & Silani, G. (2016). Divergent roles of autistic and alexithymic traits in utilitarian moral judgments in adults with autism. *Scientific Reports*, 6:23637. doi:10.1038/srep23637
- Patil, I. (2015). Trait psychopathy and utilitarian moral judgement: The mediating role of action aversion. *Journal of Cognitive Psychology*, 27(3), 349-366. doi:10.1080/20445911.2015.1004334
- Patil, I., & Silani, G. (2014). Alexithymia increases moral acceptability of accidental harms. *Journal of Cognitive Psychology*, 26(5), 597-614. doi:10.1080/20445911.2014.929137
- Patil, I., & Silani, G. (2014). Reduced empathic concern leads to utilitarian moral judgments in trait alexithymia. Frontiers in Psychology, 5:501. doi:10.3389/fpsyg.2014.00501
- Patil, I., Cogoni, C., Zangrando, N., Chittaro, L., & Silani, G. (2014). Affective basis of judgment-behavior discrepancy in virtual experiences of moral dilemmas, *Social Neuroscience*, 9(1), 94-107. doi:10.1080/17470919.2013.870091

Selected Media Coverage

Time, The Huffington Post, Daily Mail, la Repubblica, etc.

Technical Skills

Programming skills

Data analysis: R (advanced), MATLAB (intermediate), Python (beginner)

Database management: SQL (intermediate)

Web development: HTML/CSS (intermediate), JavaScript (intermediate)

Document preparation: RMarkdown (advanced), xaringan (advanced), LATEX (intermediate)

Miscellaneous: Git/GitHub, YAML

• **Techniques**: text mining, meta-analysis, logistic/linear regression, mixed effects regression, clustering (k-means, hierarchical cluster analysis, linear discriminant analysis), k-nearest neighbor, bagging, random forests, SVM, dimensionality reduction (PCA, ICA), Reinforcement Learning, Bayesian statistics, cross validation, neural networks, Structural Equation Modeling, path analysis

• Open-source software development (in R; Total downloads: > 7M):

Lead developer

- ggstatsplot (2018-): Informative data visualizations with statistical analyses.
- broomExtra (2019-): Enhancements for working with regression models.
- statsExpressions (2019-): Creates expressions with statistical details.
- pairwiseComparisons (2019-): Multiple pairwise comparison tests.

Team developer

- Co-author on correlation, insight, parameters, see, report, performance, bayestestR, ggsignif

• Statistical Analysis softwares

Classical: SPSS, jamovi; Bayesian: JASP; Structural Equation Modeling: Amos; Power analysis: G*Power

• Functional/Structural Magnetic Resonance Imaging: SPM12

Connectivity analysis: PPI (task-based), GIFT (model-free); Morphometry analyses: CAT12; Power analysis: fmripower; Artifact handling: ART, ArtRepair; Permutation tests: SnPM13, TFCE; ROI analysis: MarsBar;

Data visualization: Mango, bspmview

- Online data collection: Qualtrics, MTurk, TurkPrime
- Skin conductance data analysis: Ledalab

Honors and Awards

- Chicago R Unconference (\$200 Travel grant) by RStudio (2019).
- Dean's Competitive Fund for Promising Scholarship Award (\$69,000) by Harvard University (2017-2018).
- Summer Research Fellowship for Students and Teachers by Indian Academy of Science (2008).
- Young Scientist Fellowship by Indian Institute of Science, Bangalore (2005-6).
- Dhirubhai Ambani Scholarship by Reliance Industries Limited (2005-8).

Advising

• Undergraduate thesis/Internship/Exchange students: Carlotta Cogoni (2013-14); Marta Calò, Federico Fornasier (2014-15); Jens Melsbach (2015-16); Micaela Maria Zucchelli (2017-18); Stephanie Campbell (2017-18); Tom Osborn (2018-2019).

Chaired Symposia

- The Role of Reasoning in Moral Decision Making. European Society for Cognitive Psychology, Tenerife, Spain, September, 2019.
- Inferring Moral Character from Moral Judgments. Society for Personality and Social Psychology conference, Atlanta, Georgia, USA, March 3, 2018.
- Nice and Right: Clarifying the Relations Between Empathy and Moral Judgment. International Conference for Psychological Science, Amsterdam, The Netherlands, March 24, 2015.

Invited Talks & Colloquia

- Reasoning supports utilitarian resolutions to sacrificial moral dilemmas. 21st meeting of the European Society for Cognitive Psychology, Tenerife, Spain, September 28, 2019.
- Reasoning supports utilitarian resolutions to sacrificial moral dilemmas. EASP Meeting: Cognitive Conflicts: Taking a Cognitive Perspective on Social Phenomena, Tübingen, Germany, July 5, 2019.

- Reputational benefits of third-party compensation. 31st Annual Human Behavior & Evolution Society meeting, Boston, MA, USA, May 29, 2019.
- Reasoning supports utilitarian resolutions to sacrificial moral dilemmas. 31st APS Annual Convention, Washington, D.C., USA, May 24, 2019.
- Reasoning and affect: Individual differences in moral conflict resolution. Scalable Cooperation Group, MIT Media Lab, Cambridge, MA, USA, May 17, 2019.
- Reasoning supports utilitarian resolutions to moral dilemmas across diverse measures. Social Perception and Evaluation Lab, New York University, New York City, NY, USA, March 29, 2019.
- ggstatsplot: R package for ggplot2 Based Plots with Statistical Details. Boston useR Event, Boston, MA, USA, March 26, 2019.
- ggstatsplot: R package for ggplot2 Based Plots with Statistical Details. Harvard Psych Methods Dinners, Harvard University, Cambridge, MA, USA, February 5, 2019.
- Reasoning supports utilitarian resolutions to moral dilemmas across diverse measures. 'Reasoning in Moral Thought and Action' Workshop, Boston College, Boston, MA, USA, January 30, 2019.
- Reputational benefits of third-party compensation over punishment. Social Psychology Lunch talk series, Harvard University, Cambridge, MA, USA, November 27, 2018.
- Reputational benefits of third-party compensation over punishment. Boston Judgment and Decision Making Day, Boston College, Boston, MA, USA, November 2, 2018.
- ggstatsplot: R package for ggplot2 Based Plots with Statistical Details. Social Cognitive Development Lab, Yale University, New Haven, CT, USA, September 19, 2018.
- Reputational benefits of third-party compensation over punishment. Boston Area Moral Cognition Group meeting, Boston, MA, USA, March 22, 2018.
- Moral learning privileges model-free update. European Society for Cognitive and Affective Neuroscience meeting, Leiden University Medical Center, Leiden, Netherlands, July 21, 2018.
- Moral learning privileges model-free update. New England Research on Decision-Making conference, Harvard University, Cambridge, MA, USA, June 11, 2018.
- ggstatsplot: R package for ggplot2 Based Plots with Statistical Details. Saxe Lab meeting talk, Massachusetts Institute of Technology, Cambridge, MA, USA, June 31, 2018.
- Reputational benefits of third-party compensation over punishment. Boston Area Moral Cognition Group meeting, Boston, MA, USA, March 22, 2018.
- The behavioral and neural basis of empathic blame. Social Cognitive Science Brown Bag, Brown University, Providence, Rhode Island, USA, March 16, 2018.
- Reputational benefits of third-party compensation over punishment. Society for Personality and Social Psychology conference 2018, Atlanta, Georgia, USA, March 3, 2018.
- The behavioral and neural basis of empathic blame. The Cooperation Lab, Boston College, Boston, MA, USA, February 1, 2018.
- The behavioral and neural basis of empathic blame. Social Brain Brown Bag talk, Dartmouth College, Hanover, New Hampshire, USA, January 25, 2018.
- Neuroanatomical basis of concern-based altruism in virtual environment. Boston Judgment and Decision Making Day, Boston University, Boston, MA, USA, April 21, 2017.

- A multimodal investigation of moral decision making in harmful contexts. Department of Developmental Psychology and Educational Psychology, Ludwig-Maximilians-Universität, Munich, Germany, July 14, 2016.
- Divergent role of empathy for wrongness and blame: an fMRI investigation. International Conference for Psychological Science, Amsterdam, The Netherlands, March 24, 2015.

Peer Review

- Editorial Board, Journal of Cognition (2017-2019), Thinking & Reasoning (2018-2019).
- Review Editor, Frontiers in Human Neuroscience (2014-2019), Frontiers in Psychiatry (2018-2019).
- Ad Hoc Reviewer

Journal articles (60):

Social Cognitive & Affective Neuroscience(2), Scientific Reports(5), Cognition(2), Social Neuroscience(1), Neuropsychologia(2), PLoS One(4), Frontiers in Psychology(7), Journal of Cognitive Psychology(6), Motivation and Emotion(1), Thinking & Reasoning(3), Social Influence(1), Cognition & Emotion(1), International Journal of Psychology(1), Psychiatry Research(2), Journal of Health and Social Sciences(1), Judgment and Decision Making(1), Evolution and Human Behavior(1), Frontiers in Human Neuroscience(2), Ethics & Behavior(1), Personality and Mental Health(1), Current Directions in Psychological Science(1), Journal of Neuropsychology(1), Current Psychology(1), Experimental Psychology(1), Social Cognition(1), Emotion(3), British Journal of Psychology(1), Journal of Experimental Child Psychology(1), Journal of Affective Disorders(1), Journal of Experimental Psychology: Learning, Memory, and Cognition(1), SAGE Open(1), Research in Autism Spectrum Disorders(1), Philosophical Psychology(1)

Book chapters (1): Springer(1)

Articles for General Audience

- Authored ten popular science articles in eminent Marathi newspaper *Loksatta* on various topics from science and technology (2010-2011).
- Ananthanarayan, B., Choudhary, K., Mohapatra, L., Patil, I., Rustagi, A., & Shivaraj, K. (2007).
 Observation of Exotic Heavy Baryons, Current Science, 93:451-452.
- Ananthanarayan, B., Choudhary, K., Mohapatra, L., **Patil, I.**, Rustagi, A., & Shivaraj, K. (2007). Observation of Oscillation Phenomena in Heavy Mesons Systems, *Current Science*, 93:602-604.

References

Dr. Giorgia Silani, University of Vienna, Austria.

giorgia.silani@univie.ac.at

Dr. Fiery Cushman,
Department of Psychology,
Harvard University, USA.
cushman@fas.harvard.edu

Dr. Mina Cikara,
Department of Psychology,
Harvard University, USA.
mcikara@fas.harvard.edu