

Benjamin Lira Luttges

PhD Student at University of Pennsylvania

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I study the intersection of noncognitive skills—self-regulation in particular—and artificial intelligence. My research has three areas of focus: (1) using AI to measure non-cognitive skills, (2) developing AI-based interventions for developing non-cognitive skills, and (3) exploring the cognitive consequences of interacting with large language models. I hope to contribute to psychological science by improving our understanding of we can leverage powerful technologies to make our lives better.

1. Education

2021—2026	University of Pennsylvania PhD and MA in psychology. GPA 4.0 Advisor: Angela Duckworth
2009—2017	Universidad de Lima BA. and Professional Licensure in Psychology. GPA 4.0 Thesis: Parental Predictors of Effortful Control
2013	Katholieke Universiteit Leuven, Belgium Exchange student in master level courses

2. Grants and Awards

2018	Annual research competition winner, Pontificia Universidad Católica del Perú Awarded to the Motivation and Emotion Research Group (PUCP). Basic Psychological Needs in the Context of Poverty Grant Award: 135 000 and 45 000 PEN (53,576 USD)
2010—2015	Full honors scholarship, Universidad de Lima Est. Value: 146 523 PEN (43,612 USD)

3. Academic Positions

2021	Predoctoral Visiting Scholar , University of Pennsylvania Duckworth Lab, PI: Angela Duckworth PSYC 005-401: Grit Lab (TA)
2017—2019	Instructor , Pontificia Universidad Católica del Perú Motivation and Emotion, Psychological Measurement, Psychological Research Methods Enrollment: 10000

4. Guest Lectures

2021	University of Pennsylvania. Self-Concordant Goals.
2018	Universidad Cayetano Heredia. Cognitive Behavioral Intervention Methods

5. Publications

[Google Scholar](#)

A. Published

- Putnam, S. P., Sehic, E., French, B. F., Gartstein, M. A., **Lira, B.**, & Peltola, M. (2024). The Global Temperament Project: Parent-Reported Temperament in Infants, Toddlers and Children from 59 Nations. *Developmental Psychology*. [\[link\]](#)
- Lira, B.**, Duckworth, A. L., Gardner, M., Quirk, A., Stone, C., Rao, A., ... & D'Mello, S. K. (2023) Using Artificial Intelligence to Assess Personal Qualities in College Admissions. *Science Advances*. [\[link\]](#) Press Coverage. [\[Forbes\]](#)[\[Counselor Bites\]](#)[\[Higher Ed Dive\]](#)[\[Inside Higher Ed\]](#)[\[CU Boulder Today\]](#)[\[University World News\]](#)[\[EurekAlert!\]](#)
- Herrera, D., Costalat-Founeau, A. M., Chau, C., Mendoza, N., Arakaki, M., Cerna, Y., **Lira, B.** & Drouin, N. (2023). Adaptación de la escala de sentido de capacidad para estudiantes peruanos. *Liberabit*, 29(2). [\[link\]](#)
- Lira, B.**, O'Brien, J., Peña, P.A., Galla, B.M., D'Mello, S., Yeager, D.S., Defnet, A., Kautz, T., Munkacsy, K., Duckworth, A.L., (2022). Large Studies Reveal How Reference Bias Limits Policy Applications of Self-Report Measures. *Scientific Reports* 12(1) 19189. [\[link\]](#)

Paredes, DIH, Arakaki, M, Dammert, M, **Lira, B.**, Orientación futura, bienestar y rendimiento en universitarios de un programa de tutoría durante la pandemia COVID-19. (2022). *Revista Peruana de Investigación Educativa* 14(17)

Lira, B. & Lopez, F. E. (2022). Evaluación psicométrica de una escala de creencias conspirativas para población peruana [Psychometric evaluation of a conspiracy belief scale in a Peruvian population]. *Persona* 25, 33-51.

Duckworth, A.L., Kautz, T., Defnet, A., Satlof-Bedrick, E., Talamas, S., **Lira, B.**, & Steinberg, L. (2021). Students Attending School Remotely Suffer Socially, Emotionally, and Academically. *Educational Researcher* 50(7), 479-482. <https://doi.org/10.3102/0013189X211031551> [\[link\]](#) Press Coverage. [\[Health-Day\]](#)[\[U.S. News\]](#)[\[The 74\]](#)[\[District Administration\]](#)[\[Yahoo\]](#)[\[Phys Org\]](#)

Caffarena, C., **Lira, B.**, Campos, A.L., Rojas-Barahona, C. (2021). Psychometric properties of the Child Behavior Questionnaire (CBQ) in Chile. *Current Psychology*. 1-10. <https://doi.org/10.1007/s12144-021-01871-9> [\[link\]](#)

Herrera, D., Matos, L., Gargurevich, R., **Lira, B.**, & Valenzuela, R. (2021). Context matters: Teaching styles and basic psychological needs predicting flourishing and perfectionism in university music students. *Frontiers in Psychology* 12. 1-9. <https://doi.org/10.3389/fpsyg.2021.623312> [\[link\]](#)

Lira, B. (2017). *The predictive role of parental and maternal emotion regulation, empathy, and alexithymia in toddler's effortful control*. Universidad de Lima Undergraduate Thesis. [\[link\]](#)

Gleichgerrcht, E., **Lira, B.**, Salvarezza, F., & Campos, A.L. (2015). Educational neuromyths among teachers in Latin America. *Mind, Brain, and Education* 9(3). 170–78. <https://doi.org/doi:10.1111/mbe.12086>. [\[link\]](#)

Gleichgerrcht, E. & **Lira, B.** (2014). *Attention: fostering educational neuroscience* 5. Lima: Cerebrum Ediciones.

B. Submitted

Lira, B., Bartlett, Maria. E., Kautz, T., & Duckworth, A. L. (2024). Remote Schooling Depresses Grades for the Most Vulnerable. *PNAS Nexus* [\[link\]](#)

Matos, L., Herrera, D., **Lira, B.**, Gargurevich, R., Benita, M. Perceived Teaching Styles, Basic Psychological Needs, Motivation, Engagement, Academic Achievement and Student Well-Being in a Peruvian in a low socioeconomic students' sample. *Learning and Individual Differences*.

C. In Preparation

Lira, B., & Duckworth, A. L. What I see my role models do: Elucidating the mechanisms of reference bias. In preparation for *Psychological Methods*. [\[link\]](#)

Lira, B., ... Gross, J., & Duckworth, A.L., Delivering motivational interventions at scale using Artificial Intelligence in Khan Academy.

Lira, B., Martin, D., & A.L. Duckworth. Effect Size and Publication Bias in Psychology [\[link\]](#) .

Lira, B., & Duckworth, A.L., Attention is the missing element of Expectancy Value Theories [\[link\]](#).

D. Presentations

Lira B., (2024, February), Using Artificial Intelligence to Assess Personal Qualities in College Admissions. Society for Personality and Social Psychology Convention. San Diego.

Lira B., (2024, February), Compared to Whom? Reference Bias is Driven by Peer Exemplars. Personality Preconference. Society for Personality and Social Psychology Convention. San Diego.

Ungar, L., **Lira, B.**, (2023, November) Using Large Language Models to Help People be their 'Best' Selves. Psychology of Technology Conference. UC Berkeley. [\[link\]](#)[\[slides\]](#)

Lira B., Seraj, S., Neiderhoffer, K., Ireland, M., (2023, February) Panel on collaboration between industry and academia. Language Preconference, Society for Personality and Social Psychology Convention. Atlanta.

Chalén, J., **Lira B.**, & Herrera, D. (2022, July). Future Orientation, Wellbeing, Life Purpose& Academic Performance in University Students from Lima [Symposium]. 5th International Conference on Time Perspective. Vilnius, Lithuania (Virtual). [\[link\]](#)[\[link2\]](#)

Lira, B., (2022, June). Using Artificial Intelligence to Assess Personal Qualities in College Admissions. Summer Institutes for Computational Social Science [\[link\]](#) .

Lira, B., O'Brien, J., Peña, P., Galla, B. M., D'Mello, S., Yeager, D. S., Defnet, A., Kautz, T., Munkacsy, K.,& Duckworth, A. L. (2022, July). Large Studies Reveal How Reference Bias Limits Policy Applications of Self-Report Measures. In C.J. Soto (Chair), Conceptualization, Assessment, and Implications of Social, Emotional, and Behavioral Skills [Symposium]. European Conference on Personality 2022, Madrid, Spain.

Lira B., et al. (2021, September). Students Attending School Remotely Suffer Socially, Emotionally, and Academically. In B. Gill& E. Stuart (Chairs), Mental and Physical Health Implications of School Operating Approaches During the COVID-19 pandemic [Symposium]. Society for Research on Educational Effectiveness Conference 2021. [\[link\]](#)

Lira, B. (2018, May). The predictive role of parental emotion regulation, empathy, and alexithymia on preschooler's effortful control [Poster presentation]. 22nd Occasional Temperament Conference (OTC). Murcia, Spain.

Lira, B. (2016, November). Self-regulation and its impact in and out of the classroom [Presentation]. Self-Regulation Seminar: Cerebrum. Puerto Varas, Chile. [\[link\]](#)

Lira, B. (2016, September). Educational neuromyths in Latin America [Conference Session]. Fifth Peruvian Society for Educational Research Conference (SIEP) Seminar. Ayacucho, Peru. [\[link\]](#)

Lira, B. (2016, September). The importance of cognitive regulation in the classroom [Presentation]. Self-regulation Seminar: Cerebrum. Medellin, Colombia. [\[link\]](#)

Lira, B. (2015, March). Neurodiversity and Inclusion in Education [Panel participant]. International Seminar on Neurodiversity: Cerebrum. Lima, Peru. [\[link\]](#)

6. Technical Skills

Programming. Python, R, Qualtrics, SPSS, Factor, MPlus, MLWin, Psychopy

Natural Languages. Spanish—Native English—Proficient German—Basic

Statistical Methods. Exploratory and confirmatory factor analysis, multilevel modelling, structural equation modelling, cluster analysis, polynomial regression with response surface analysis (RSA), non-parametric regression methods including logistic, Poisson, and negative binomial regression, and machine learning methods including tress, random forests, penalized regression, boosting, support vector machines, deep learning, neural networks, auto-encoders, generalized mixture models, k-means, reinforcement learning, text modelling (Transformers, LDA, Naïve Bayes).

7. Miscelaneous

A. Additional Education

Summer Institutes Of Computational Social Psychology.
Foundations of Data Analysis – Part I. University of Texas at Austin. MOOC.
The Analytics Edge. MITx. MOOC.
Quantitative Biology Workshop. MITx. MOOC

B. Additional Projects

#Investigatips. Video library explaining research methods and statistics. +120K video views. (In Spanish)

Statistics for Psychologists with R. A series of self-guided tutorials and practice sets exploring common data manipulation, visualization, and analysis tasks in R. Collaboration with Chayce Baldwin

R Package. Custom functions for ordinal alpha, Mahalanobis outlier detection, discriminant validity analysis, and data simulation.

Natural Language Processing Tools. Custom R and Python functions and tutorials for Natural Language Processing in the Social Sciences.

C. Test Scores

Graduate Records Examination (GRE). Nov 14, 2019. Verbal: 169 (99th Pc.), Quantitative: 166 (89th Pc.), Analytical Writing: 5.5 (98th Pc.)

Test of English as a Second Language (TOEFL). Sept 28, 2019. Writing: 30, Speaking: 29, Reading: 30, Listening: 30. Overall 119/120

8. Work Experience

2023	Data Scientist, Talking to Machines Project, Oxford University Built chatbot systems for qualitative interviewing in social science research Built data analysis pipelines for the generated data.
2020—2021	Visiting scholar, Duckworth Lab, University of Pennsylvania Duckworth Lab, PI: Angela Duckworth Participated in all aspects of the research process: conceptualization, data collection, data analysis, writing, submission and revision. Mentored an undergraduate researcher and a group of high-school interns. Designed activities for an undergraduate course on motivation. Designed and taught a series of lessons on statistical analysis using R.
2016 – 2020	Research scientist, Pontificia Universidad Católica del Perú Motivation and Emotion Research Group. Projects: Basic psychological needs and poverty Maternal autonomy support Basic psychological need support and thwarting and engagement in school and university Autonomy support intervention program Need support and thwarting in competitive sports
2015 – 2017	Lead research analyst, Cerebrum Was responsible for research and intervention programs. Taught and supervised graduate students' theses. Wrote articles for the education community. Participated in conferences. Developed content for graduate courses in educational neuroscience.
2016	Statistical consultant, EVACP Consulting Carried out psychometric and statistical analysis for a social program impact evaluation for the Peace Corps in Peru.
2015 –	Thesis advisor Coached and supported +30 undergraduate and graduate students from Universidad de Lima, Pontificia Universidad Católica del Perú, Universidad Peruana de Ciencias Aplicadas in multiple stages of their thesis projects.
2014 – 2015	Research and educational psychology intern, Cerebrum Created an intervention program for the development of self-regulation and executive function and designed a tool to evaluate its impact. Developed content for graduate courses in educational neuroscience.
2012—2013	Research assistant, Universidad de Lima Edited and reviewed a book manuscript about the philosophy of the mind. Developed methodology, programmed computerized experiments, and oversaw data collection.

9. Community Service & Organizational Involvement

Volunteer for the program Un Techo Para Mi País, building houses after the Chinchá 2007 earthquake. Constructed 5 houses for the benefit of 5 families.
Volunteer for CPDI, a malnutrition prevention center in Pamplona, Peru.
One hundred and fifty hours of service in the IB-CAS program: building homes, tutoring children, among other service labors.
Volunteer for the Peruvian Ministry of Education. Conducted interviews with teachers and principals regarding the effectiveness of feedback received by schools after the Census Student Evaluation.
Member of Colegio de Psicólogos del Perú (National Association of Psychologists of Peru). CPsP. 31816

10. References

Angela Duckworth	Professor of Psychology	aduckworth@characterlab.org
Lyle Ungar	Professor of Computer Science	ungar@cis.upenn.edu
Kate Neiderhoffer	Director, Labs, BetterUp	kate.niederhoffer@betterup.co
Lennia Matos	Professor of Psychology	lmatosf@pucp.pe
Sandra Inurritegui.	Professor of Psychology	sinurrit@ulima.edu.pe
Dora Herrera	Professor of Psychology	diherrer@pucp.edu.pe