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# Alejandro Pérez Velilla

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## *Curriculum Vitae*

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### Personal information

nationality Colombian  
residence Merced, California  
date of birth 21/01/1993

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### Education

- 2021– **PhD studies in Cognitive and Information Sciences**, *University of California, Merced*, Merced, California, USA  
Ongoing PhD studies under the supervision of Paul Smaldino at UC Merced. Focused on modeling the development, cultural transmission and consequences of risk mitigation strategies across societies.
- 2015–2020 **Licenciatura in Anthropological Sciences, Sociocultural Orientation**, *Universidad de Buenos Aires*, Buenos Aires, Argentina  
Licentiate degree program in Anthropological Sciences. The coursework is thought for a five-year program and it ends with a graduate thesis defense. The program includes courses in the History of Social Anthropology, introductions to Archaeology and Biological Anthropology, as well as courses in Historical Anthropology, Hunter-Gatherer and Small-Scale Societies, Contemporary Anthropological Theory and methodological courses and seminars on ethnographic fieldwork, quantitative and computational methods, academic writing and epistemology.
- 2014–2015 **Ciclo Básico Común**, *Universidad de Buenos Aires*, Buenos Aires, Argentina  
Basic common cycle, necessary for admission to a Universidad de Buenos Aires degree program.
- 2011–2012 **Filmmaking Year Program**, *Prague Film School*, Prague, Czech Republic  
Intensive one-year program in filmmaking, with emphasis in Direction and Direction of Photography.

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### Licentiate thesis

title *Self-organization strategies in scout movements: a case study of the Exploradores movements from the Buenos Aires villas.*  
supervisors Diego Diaz Cordova, PhD.

description Thesis resulting from a six-month fieldwork with two scoutist Exploradores groups from at-risk neighborhoods (villas) of Buenos Aires. The objective was to model the structural dynamics of group formation, reproduction and coordination in these movements (where a movement is composed of one or several groups in interaction), coupling interviews and qualitative observations with social network analysis and the development of a generative network model informed by the observed dynamics and cultural evolutionary theory—in particular prestige hierarchies and cultural group selection. The thesis seeks to provide a possible explanation for the rapid and expansive propagation of scoutism since its introduction at the beginning of the twentieth century. A broad comparison is done between scoutist movements and other prestige hierarchies in the ethnographic literature. It was presented and defended in the first quarter of 2020.

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## Publications

### Work in progress

Pérez Velilla, A., Padilla, K. J., Cassiani Cervantes, D., Herrera, Y., Hernández, A., Hurtado Manyoma, A., Pérez Salinas, M., Sosa, S., Dalla Ragione, A., Ross, C. T. *A full-population assessment of Palenquero proficiency in San Basilio de Palenque, Colombia.*

Pérez Velilla, A., Nöldeke, G., Peña, J. *Reciprocity and the evolution of risk-reduction sharing.*

Pérez Velilla, A., Smaldino, P. *Similarity-biased learning: a theory.*

Pérez Velilla, A., Ready, E. *The emergence of sharing networks through indirect signaling.*

Pérez Velilla, A., McElreath, R. *Breaking the paradox: bet hedging and the evolutionary rationality of social learning.*

### In press

Pérez Velilla, A., Beheim, B., Smaldino, P. *The development of risk attitudes and their cultural transmission.* Psychological Review. American Psychological Association.

Pérez Velilla, A., Smaldino, P. *Risk, learning and culture.* In A. Gallup, S. Karithayan, G. Geher. (Eds.) Oxford Handbook of Evolutionary Psychology. Oxford University Press.

Pérez Velilla, A., Smaldino, P. *The adaptive role of peer culture is shaped by risk landscapes.* Commentary for target article Lew-Levy, S. & Amir, D. (2024) *Children as agents of cultural adaptation.* Behavioral and Brain Sciences. Cambridge University Press.

### Published work

- 2025 Smaldino, P., Pérez Velilla, A. *The Evolution of Similarity-Biased Social Learning.* Evolutionary Human Sciences. Cambridge University Press. 2025;7:e4. doi:10.1017/ehs.2024.46

- 2024 Smaldino, P., Moser, C., Pérez Velilla, A., Werling, M. (2024) *Maintaining transient diversity is a general principle for improving collective problem solving*. Perspectives on Psychological Science 19(2), 454-464.
- 2022 Pérez Velilla, A., Moser, C., Smaldino, P. (2022) *Hidden Clusters Beyond Ethnic Boundaries*. Commentary for target article Uchiyama, Spicer & Muthukrishna (2022) *Cultural Evolution of Genetic Heritability*. Behavioral and Brain Sciences. Cambridge University Press.
- 2020 Pérez Velilla, A. *Redes sociales y jerarquización: dinámicas de relación y diferenciación en un movimiento escautista bonaerense*. Presentation and book chapter for Reunión Latinoamericana de Redes Sociales. Mendoza, Universidad Nacional de Cuyo.
- 2019 Pérez Velilla, A. *Jerarquía y desigualdad social: reflexiones antropológicas en torno al rol de las estructuras sociales jerárquicas en la organización de la vida social*. Presentation for Segundas Jornadas de Estudio Sobre Jerarquías. Buenos Aires, Facultad Latinoamericana de Ciencias Sociales.
- 2018 Pérez Velilla, A. *Dinámicas de auto-organización en un movimiento escautista bonaerense*. Presentation for Work Group 17: Anthropological studies on social movements: practices, politics and relationships with state agencies. IX Jornadas de Investigación Santiago Wallace. Facultad de Filosofía y Letras, Universidad de Buenos Aires.  
<http://jiassw.com.ar/wp-content/uploads/2017/01/IX-JIASSW-Programa.pdf>

## Grants and awards

- 2024 Graduate Student Researcher Fellowship. *Environmental Instability and the Utility of Prestige-Biased v. Conformist Social Learning*. Center for Analytic Political Engagement.
- 2024 Advancing Cultural Evolution (ACE) Early Career Research Grant. *The formation of economic aid networks and their effects on language revitalization efforts in San Basilio de Palenque, Colombia*. Cultural Evolution Society.

## Academic experience

### Participation in academic conferences and workshops

- 2025 **Building a Science of Cultural Evolution for the 21st Century Workshop**, Santa Fe Institute, Santa Fe, New Mexico, USA  
Co-organizer
- 2025 **California Workshop on Evolutionary Social Sciences**, University of California, Santa Barbara, Santa Barbara, California, USA  
Presentation: The development of risk behaviors and their cultural transmission
- 2023 **Early Career Social Learning Researchers Society Workshop**, Max Planck Institute for Human Development, Berlin, Germany  
Poster: Deceived by Chance: Pessimism in Learning and the Adaptive Value of Conformity Under Uncertainty

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- 2023 **Workshop: Information Architectures as Socio-Technical Competitions**, *Santa Fe Institute*, Santa Fe, New Mexico, USA  
Presentation: Social learning, decision-making under uncertainty and environmental instability
- 2023 **European Human Behaviour and Evolution Association conference**, London, United Kingdom  
Presentation: Within-lineage marriage and wealth inheritance
- 2022 **Cultural Evolution Society Conference**, Aarhus, Denmark  
Presentation: The evolution of sharing networks under risk and uncertainty
- 2022 **International Conference of Computational Social Sciences**, Chicago, Illinois  
Poster presentation: The evolution of sharing networks under risk and uncertainty
- 2022 **Summer School Complexity-GAINS on Disintegration of Societies**, Vienna, Austria, Santa Fe Institute
- 2022 **Toulouse Summer School in Quantitative Social Sciences**, Toulouse, France, Toulouse School of Economics
- 2022 **Spring School on Evolution of Social Complexity**, Vienna, Austria, Complexity Science Hub Vienna
- 2022 **9th Toulouse Economics and Biology Workshop**, Toulouse, France, Toulouse School of Economics  
Poster presentation: The evolution of sharing networks under risk and uncertainty.
- 2019 **Reunión Latinoamericana de Análisis de Redes Sociales**, Mendoza, Argentina, UNCuyo  
Latin-American meeting for the use and application of Network Analysis in social research. Presented a network analysis of scout group structure and coordination based on advances in control theory.
- 2019 **Segundas Jornadas de Estudio Sobre Jerarquías**, Buenos Aires, Argentina, FLACSO  
Conference on social hierarchies and social inequality. Presented a review of hierarchies as studied in social sciences, particularly anthropology.
- 2019 **Jornadas de Fundamentos y Aplicaciones de la Interdisciplina**, Buenos Aires, Argentina, Universidad de Buenos Aires  
Conference on interdisciplinary research. Did a presentation on Complex Systems for the integration of social and biological sciences.
- 2018 **IX Jornadas de Investigación Santiago Wallace**, Buenos Aires, Argentina, Universidad de Buenos Aires  
Anthropology congress at University of Buenos Aires. Presented an advance of the study of group processes through a cognitive ethnographic perspective.
- [Positions and internships](#)
- 2024–  
Ongoing **Mentorship with undergraduate students from the Cognitive and Information Sciences department at University of California, Merced.**, *Mentorship for Under-Graduates (MUG) Program.*, Merced, California.
- 2024–  
Ongoing **Fieldwork in the town of San Basilio de Palenque, demographic, socio-economic and language proficiency census.**, *Cody Ross, Max Planck Institute for Evolutionary Anthropology.*, Bolívar, Colombia.

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- 2023–  
Ongoing **Fieldwork in the Canadian Arctic Inuit community of Kangiqsujuaq, household survey on hunting, sharing and food security.**, *Elspeth Ready, Max Planck Institute for Evolutionary Anthropology.*, Quebec, Canada.
- 2022–  
Ongoing **Guest Researcher at Department of Human Behavior, Ecology and Culture at the Max Planck Institute for Evolutionary Anthropology**, *Richard McElreath, Max Planck Institute for Evolutionary Anthropology.*, Leipzig, Germany.
- 2022–2023 **Research Assistant for project on modeling Information Architectures**, *Paul Smaldino, University of California Merced.*, Merced, California.
- 2021–  
Ongoing **Teacher's Assistant for undergraduate courses from the Cognitive and Information Sciences department**, *Paul Smaldino, University of California Merced.*, Merced, California,
- 2021–  
Ongoing **Cognitive and Information Sciences PhD program**, *Paul Smaldino, University of California Merced.*, Merced, California.
- 2018–2020 **Distributed fieldwork in two Buenos Aires villas (emergent at-risk neighborhoods).**, Buenos Aires, Argentina.
- 2018 **Teacher's Assistant for extension seminar "Computational Social Science for the study of Cultural Evolution"**, *Gustavo Landfried, UBA*, Buenos Aires, Argentina.
- 2016–2017 **Internship at Biological Anthropology Laboratory, Universidad Maimónides**, *Cristina Dejean, Dr. Sergio Avena*, Buenos Aires, Argentina.  
DNA extraction and sequencing for unveiling African heritage in the Buenos Aires Metropolitan Area.
- 2015 **Internship at Argentine Team of Forensic Anthropology**, *EAAF*, Buenos Aires, Argentina
- Scientific software development
- 2024 **BaryPlots.jl**, *Julia package for visualizing trajectories of evolutionary games on a ternary simplex.*, Alejandro Pérez Velilla and Jorge Peña., <https://github.com/datadreamscorp/BaryPlots.jl>

## Academic interests

- Mathematical and computational modeling of social/cultural systems and their evolution
- Cultural evolution, short- and long-term social norm change under risk and uncertainty
- Bayesian statistical modeling and causal inference
- Evolutionary game theory, numerical simulation and Agent-Based Modeling
- Simulation-based inference for real-world applications

## Computer skills

Basic    Spreadsheets, Git, LaTeX, Linux

Modeling and data analysis    Julia, Python, R, SQL

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Programming languages Julia, C++, Java, R, Python, Haskell

## Languages

Spanish Native language  
English Second language  
Portuguese Basic  
German Basic  
Mandarin Basic  
Chinese

*Band 8.5 in IELTS Academic exam, 2018.*

*Reading, writing and basic conversational.*

*Reading, writing and basic conversational.*

*Reading, writing and basic conversational.*

## Personal interests (hobbies)

Film and Filmmaking  
Comics  
Game design  
Philosophy and Mathematics

## References

### Academic

- Diego Díaz Cordova, PhD., Universidad de Buenos Aires, Universidad Nacional de Lanús, [didibart@gmail.com](mailto:didibart@gmail.com)
- Paul Smaldino, PhD., University of California, Merced, [psmaldino@ucmerced.edu](mailto:psmaldino@ucmerced.edu)

### Internships

- Patricia Bernardi, Argentine Team of Forensic Anthropology, [patobernardi@yahoo.com](mailto:patobernardi@yahoo.com)
- Cristina Dejean, Biological Anthropology Lab, Universidad Maimónides, [dejeancr@gmail.com](mailto:dejeancr@gmail.com)