
Alejandro Pérez Velilla

Curriculum Vitae

Personal information

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

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 Basico Comun**, *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.

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 status, 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.

Publications

- 2024 Smaldino, P., Pérez Velilla, A. (IN PRESS.) *The Evolution of Similarity-Biased Social Learning*. Evolutionary Human Sciences. Cambridge University Press.
- 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 *Cultural Evolution of Genetic Heritability*. Uchiyama, Spicer & Muthukrishna, 2022. Behavioral and Brain Sciences. Cambridge University Press.
- 2020 Pérez Velilla, A. *Redes sociales y jerarquizacion: dinamicas de relacion y diferenciacion en un movimiento escautista bonaerense*. Presentation and book chapter for Reunion Latinoamericana de Redes Sociales. Mendoza, Universidad Nacional de Cuyo.
- 2019 Pérez Velilla, A. *Jerarquia y desigualdad social: reflexiones antropologicas en torno al rol de las estructuras sociales jerarquicas en la organizacion de la vida social*. Presentation for Segundas Jornadas de Estudio Sobre Jerarquias. Buenos Aires, Facultad Latinoamericana de Ciencias Sociales.
- 2018 Pérez Velilla, A. *Dinamicas de auto-organizacion 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 Investigacion Santiago Wallace. Facultad de Filosofia y Letras, Universidad de Buenos Aires.
<http://jiassw.com.ar/wp-content/uploads/2017/01/IX-JIASSW-Programa.pdf>

Work in progress

Pérez Velilla, A., Beheim, B., Smaldino, P. *The development and cultural transmission of risk attitudes*.

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

Pérez Velilla, A., Smaldino, P. *The cultural group selection of optimal sharing norms*.

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

Academic experience

Participation in academic conferences and workshops

- 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
- 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 **Summer School on 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 **Reunion Latinoamericana de Analisis 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 Jerarquias**, 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.

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- 2018 **IX Jornadas de Investigacion Santiago Wallace**, Buenos Aires, Argentina, Universidad de Buenos Aires
General 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.
- 2023–
Ongoing **Fieldwork in the Canadian Arctic Inuit community of Kangiqsujaq, 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 Maimonides**, *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 modelling of social/cultural systems and their evolution.

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- Cultural evolution, theoretical and applied.
- 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
General programming languages	Julia, C++, Java, R, Python, Haskell

Languages

Spanish	Native language	
English	Second language	<i>Band 8.5 in IELTS Academic exam, 2018.</i>
Portuguese	Basic	<i>Reading, writing and basic conversational.</i>
German	Basic	<i>Reading, writing and basic conversational.</i>
Mandarin Chinese	Basic	<i>Reading, writing and basic conversational.</i>

Personal interests (hobbies)

Film and Filmmaking
Comics
Game design
Philosophy and Mathematics

References

Academic

- Diego Diaz Cordova, PhD., Universidad de Buenos Aires, Universidad Nacional de Lanus, didibart@gmail.com
- Jorge Miceli, PhD., Universidad de Buenos Aires, jorgemiceli67@gmail.com
- Paul Smaldino, PhD., University of California, Merced, psmaldino@ucmerced.edu

Internships

- Patricia Bernardi, Argentine Team of Forensic Anthropology, patobernardi@yahoo.com
- Cristina Dejean, Biological Anthropology Lab, Universidad Maimonides, dejeancr@gmail.com