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 Licenciate 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 Photograhy.

Licenciate 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

Work in progress

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

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.*

Published work

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 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 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

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

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   **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 Unniversity 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 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 modelling of social/cultural systems and their evolution.
- 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	*Band 8.5 in IELTS Academic exam, 2018.*
Portuguese	Basic	*Reading, writing and basic conversational.*
German	Basic	*Reading, writing and basic conversational.*
Mandarin Chinese	Basic	*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
- 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 Maimónides,
  dejeancr@gmail.com