# Pablo Andrés Contreras Kallens

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# Education

- 2018 2023 **Ph. D., Department of Psychology**, Cornell University, Ithaca, NY 14850.

  Advisor: Morten H. Christiansen
- 2018 2021 M. A., Department of Psychology, Cornell University, Ithaca, NY 14850. Advisor: Morten H. Christiansen
- 2016 2018 Graduate Studies, Department of Cognitive and Information Sciences, University of California, Merced.

  Advisor: Rick Dale
- 2013 2016 M. A. in Philosophy, Universidad de Chile, Santiago, Chile, Summa cum Laude.

  Dissertation: The Ghost's Machine. Unit of analysis in cognitive science [In Spanish]
- 2008 2012 **B. A. in Philosophy**, Universidad de Chile, Santiago, Chile, Summa cum Laude.

  Dissertation: Direct Perception. The ecological approach as an alternative to cognitivism in perception [In Spanish]

# Fellowships and Awards

- 2021 Department of Psychology, Graduate Teaching Award.
- 2018 Pres Sage Fellow, Cornell University. Funding for Ph. D. studies
- 2016 2020 Fulbright Foreign Student Program for Doctorate Studies, Fulbright Commission Chile.

  Sponsorship for Ph. D. Studies
- 2013 2015 Scholarship for Graduate Studies in Chile, CONICYT.

  Funding for M. A. studies

Peer-Reviewed Publications

- Under Contreras Kallens, P., Monaghan, P., Christiansen, M.H.
  Revision "Words for actions and words for things sound different in languages across the world."
  - 2023 Contreras Kallens, P., Kristensen-McLachlan, R.D., Christiansen, M.H. "Large Language Models demonstrate the potential of statistical learning in language.". Cognitive Science, 47(3), e13256.
  - 2023 Contreras Kallens, P., Yoshimi, J. "A bibliometric analysis of the phenomenology literature.". In *Horizons of Phenomenology: Essays on the State of the Field and its Applications*. Springer.
  - 2022 Contreras Kallens, P., Hicks, D. J., Jennings, C. D. "Networks in philosophy: Social networks and employment in academic philosophy". *Metaphilosophy* 53(5), 653-684.
  - 2022 Christiansen, M. H., Contreras Kallens, P., Trecca, F. "We Need a Comparative Approach to Language Acquisition: A commentary on Kidd and Garcia". First Language 42(6), 751-755.
  - Dale, R., Contreras Kallens, P. "Dissipation, Integration and Practical Pluralism: The Case of Cognitive Science".
    In M. Belanger, P. Potvin, S. Horst, E. Mortimer and A. Shtulman (Eds.), Multidisciplinary Perspectives on Representational Pluralism (pp. 250-269). Routledge.
  - 2022 Christiansen, M. H., Contreras Kallens, P., Trecca, F. "Toward a Comparative Approach to Language Acquisition". Current Directions in Psychological Science 31(2), 131-138.
  - 2022 **Contreras Kallens, P.**, Dale, R., Christiansen, M. H. "Quantifying Interdisciplinarity in Cognitive Science and Beyond". *Topics in Cognitive Science* 14, 634–645, doi: 10.1111/tops.12609
  - 2022 Contreras Kallens, P., Christiansen, M. H.

    "Models of Language and Multiword Expressions".

    Frontiers in Artificial Intelligence 5:781962. doi: 10.3389/frai.2022.781962
  - 2019 Smaldino, P., Turner, M., Contreras Kallens, P. "Open science and modified funding lotteries can impede the natural selection of bad science". Royal Society Open Science 6 (7), 190194

- 2018 Contreras Kallens, P., Christiansen, M. H., & Dale, R. "Linguistic diversity and individual variation: A comment of 'Rethinking foundations of language from a multidisciplinary perspective' by T. Gong et al". Physics of Life Reviews 26, 164-166.
- 2018 Contreras Kallens, P., Dale, R. & Smaldino, P. "Cultural Evolution of Categorization". Cognitive Systems Research 52, 765:774.
- 2018 Dale, R., Galati, A., Alviar, C., Contreras Kallens, P., Ramirez-Aristizabal, A., Tabatabaeian, M., Vinson, D. W. "Interacting Timescales in Perspective-Taking". Frontiers in Psychology 9, 1278.
- 2018 Contreras Kallens, P. & Dale, R. "Exploratory mapping of theoretical landscapes through word use in abstracts".

  Scientometrics 116(3), 1641-1674.
- 2014 Contreras Kallens, P. "Palabra y Concepto: acercamiento a un eliminativismo conceptual en ciencia cognitiva". Revista Colombiana de Filosofía de la Ciencia 14 29:139-16.

# Science Communication

2022, October Christiansen, M. H., Contreras Kallens, P. "AI is changing scientists' understanding of language learning - and raising questions about an innate grammar". The Conversation.

# Technical Reports

#### Academic placement in philosophy

Carried out for the Academic Placement Data and Analysis Group. Results featured in *Daily Nous*.

- 2017 Dicey-Jennings, C., Cobb, P., Contreras Kallens, P., Kyrilov, A. "Academic Placement Data and Analysis: 2017 Final Report". Available here.
- 2017 Dicey-Jennings, C., Contreras Kallens, P., & Vlasits, J. "The Philosophical Gourmet Report and Placement". Available here.

Higher education reform in Chile

This is a series of analyses of the reforms to higher education put forward by the Chilean government during 2016. Written as part of the research work done for the Universidad de Chile Student Union (FECH) Study Center, CEFECH, along with fellow director Fernando Carvallo Arrau. They are all available at my personal website. The results of these reports were widely reported in the media. Fernando Carvallo also presented them to the Chilean Congress in August 8th, 2016.

- 2016 Carvallo Arrau, F. & Contreras Kallens, P. "Minuta de analisis. Gratuidad 2016"
- 2016 Contreras Kallens, P. & Carvallo Arrau, F. "Minuta de Analisis de la Reforma a la Educacion Superior Parte I: Educacion de mercado y derechos sociales"
- 2016 Carvallo Arrau, F., Contreras Kallens, P., Gallegos Vallejos, T., & López Orellana, D. "Minuta de analisis proyecto de ley de Educacion Superior Parte II. La 'Reforma': Continuidad y Perfeccionamiento"

#### Invited talks

Titles of presentations given in Spanish are presented along with a translation in square brackets and italics. Only first authored presentations are included.

- 2022 Contreras Kallens, P. & M. H. Christiansen <u>"AI Poetry and Human Language"</u>. Invited AI seminar delivered to the Department of Computer, Cornell University, Ithaca, NY
- 2022 Contreras Kallens, P. "When Large Language Models
  Write Poetry". University of Illinois, Urbana-Champaign,
  School of Information Sciences.
- 2022 **Contreras Kallens, P.** "Diversidad lingüística, uso y adquisición del lenguaje" Universidad católica de la Santísima Concepción
- 2022 Contreras Kallens, P. "Metaciencia computacional: El caso de la ciencia cognitiva" [Computational metascience: The case of cognitive science]. Instituto de Filosofía y Ciencias de la Complejidad IFICC, Chile.
- 2022 Contreras Kallens, P. 'Evidence of sound-meaning cues in a typologically and genealogically diverse dataset of two hundred languages". Palacky University, Department of General Linguistics, Czech Republic.

2022 Contreras Kallens, P. "Doing metascience computationally". ASU Machine Learning Days 2022, Arizona State University.

#### Selected Presentations

- Titles of presentations given in Spanish are presented along with a translation in square brackets and italics. Only first authored presentations are included.
- 2022 Contreras Kallens, P., Christiansen, M. H., & Monaghan, P. "Evidence of sound-meaning cues in a typologically and genealogically diverse dataset of two hundred languages". Presentation. Crosslinguistic Perspectives on Processing and Learning X-PPL, 2022..
- 2022 Contreras Kallens, P., Christiansen, M. H., & Monaghan, P. "Sound-meaning patterns useful for learning available in languages from over fifty families". Poster. AMLaP 2022. Online presentation.
- 2020 Contreras Kallens, P. & Christiansen, M. H. "Phonological patterns distinguish words for actions and things in typologically diverse languages". Talk. Words in The World Conference 2020. Online conference. Abstract available in the published proceedings.
- 2020 Contreras Kallens, P. & Christiansen, M. H. "Phonological cues to semantic class membership across hundreds of languages". Poster. Evolution of Language 13. In-person meeting cancelled because of COVID-19 Epidemic. Summary available in the published Proceedings.
- 2017 Contreras Kallens, P. & Dale, R. "Mapping the Theories of Cognitive Science Using LSA". Poster. Annual Meeting of the Society for Computers in Psychology. Vancouver, Canada.
- 2015 Contreras Kallens, P. "Una perspectiva metateorica para la explicacion no individualista de la cognicion" [A metatheoretical view of non-individualistic explanation of cognition]. Talk. "Aproximaciones experimentales a la Interacción Social" symposium, Instituto de Sistemas Complejos de Valparaíso, Valparaíso, Chile.

- 2014 Contreras Kallens, P. "Perspectivas teoricas para la explicacion no individualista de la cognicion" [Theoretical views for the non-individualistic explanation of cognition].

  Talk. IV Workshop on Philosophy and Cognitive Science, Sociedad Argentina de Análisis Filosófico (SADAF), Buenos Aires, Argentina.
- 2014 Contreras Kallens, P. "Un lugar para el individualismo en la ciencia cognitiva" [A role for individualism in cognitive science]. Talk. V Coloquio Lenguaje y Cognición, Universidad de Concepción, Concepción, Chile.
- 2012 Contreras Kallens, P. "Eliminativismo conceptual:
  Acercamiento desde la externalizacion sensoriomotra y
  lingüistica" [Concept eliminativism: an approach from sensorimotor and linguistic externalization]. Talk. III
  Workshop in Philosophy and Cognitive Science, Sociedad Argentina de Análisis Filosófico, Buenos Aires, Argentina.

## Research Positions

- 2021 2022 **Research Assistant**, Cornell University.

  Working in a New Frontiers grant for professors Morten H.

  Christiansen and Laurent Dubreuil.
- 2017 2018 Graduate Student Researcher, University of California, Merced.

  Working on an agent based model of the effects of different funding

schemes for science for professor Paul Smaldino.

- 2017 2020 Quantitative Measures Advisor, Academic Placement Data and Analysis Group, placementdata.com/about/.

  Work in developing surveys and analyzing data regarding academic placement and other dimensions of graduate studies at the Academic Placement Data and Analysis project under professor Carolyn Dicey Jennings
  - 2016 **Head researcher**, Universidad de Chile Student Union (FECH).
    - At the Student Union's Study Center, CEFECH (Centro de Estudios de la Federación de Estudiantes de la Universidad de Chile). Worked writing and presenting research on educational policy. Helped coordinate the study groups.
- 2013 2015 **Graduate Dissertation Researcher**, Universidad de Chile.
  - Took part of professor Manuel Rodriguez's research grant, The principle of compositionality in the light of the debates about the relationship between mind and language: a problem of choice of cognitive architecture.

# Teaching

## Teaching Assistantships

- Spring 2023 **Psychology of Language**, Cornell University, Ithaca, New York.

  Morten H. Christiansen
- Spring 2021 **Computational Psychology**, Cornell University, Ithaca, New York. Shimon Edelman
  - Fall 2020 Introduction to Behavioral Neuroscience, Cornell University, Ithaca, New York.

    Tim Devoogd
- Spring 2020 **Developmental Psychology**, Cornell University, Ithaca, New York.

  Michael Goldstein
  - Fall 2018 **Applied Perception**, Cornell University, Ithaca, New York.

    David Field
- Spring 2017 **Free Will**, *University of California*, *Merced*, Merced, California.

  Carolyn Dicey-Jennings
  - Fall 2017 Introduction to Cognitive Science, University of California, Merced, Merced, California.

    Rick Dale
- Fall 2013, 2014, Epistemology, Universidad de Chile, Santiago, Chile.
  - 2015~ Guido Vallejos, Rodrigo González, Manuel Rodríguez
  - Fall 2015 Introduction to Philosophy, Universidad de Chile, Santiago, Chile. Manuel Rodríguez, Claudia Gutiérrez, María José López

#### Course Design

2014 - 2016 **Epistemology**, *UNIACC*, Santiago, Chile. Course Designer and Online Tutor, Psychology Department

## Service

#### Ad-hoc reviewer

Cognitive Science

Eidos

Language Learning

Synthese

Límite

Cognitive Processing

#### Editorial

2019 - Present Editorial committee and web designer. Revista ROSA (http://www.revistarosa.cl/)

2017 - 2019 International editor. Cuadernos de Coyuntura (http://www.nodoxxi.cl/centro-de-estudios/)

2017 Inaugural editor. Fulcro

## Organizing

2017 - 2018 Graduate Delegate, University of California, Merced.

Delegate of the Cognitive and Information Sciences to the Graduate Student Association's Delegate Assembly.

2013 - 2015 Representative (different levels), Universidad de Chile Student Union (FECH).

Representative for graduate students at different levels, including Graduate Student Delegate for the entire population of graduate students of the Universidad de Chile.

#### Affiliations

Member of the Cognitive Science of Language Lab at Cornell University.

Director: Morten H. Christiansen.

Member of the Co-Mind Lab at the University of California,

Los Angeles.

Director: Rick Dale.

Member of the Cognitive Science Society

# Skills

R Advanced

Python Intermediate

Java Intermediate

Julia Intermediate

# Languages

Spanish Native

English Fluent