



# Juan David Leongómez

ASSOCIATE PROFESSOR

Faculty of Psychology, Universidad El Bosque

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*I am a scientist mainly interested in human behaviour, and more recently quantitative methods and reproducible science.*

## About me

I am an Associate Professor and Researcher at the Human Behaviour Lab (LACH), Faculty of Psychology, at Universidad El Bosque in Bogota, Colombia. My research interests include mate choice and human vocal communication, with an aspiration towards understanding musicality. I am also interested in bioacoustics and psychoacoustics, as well as hormonal effects on human behaviour. I am getting more and more passionate about quantitative methods and R programming, to promote reproducibility and open science.

## Primary Research Methods

- Experimental designs
- Online questionnaires
- Voice recording
- Acoustic analysis
- Facial photographs
- Geometric morphometrics
- Anthropometry
- Data Science-Based Reproducible Research

## Skills

<b>Data Science</b>	R (advanced: all data wrangling, analysis, plots and tables made in R)
<b>Reproducible Report</b>	Markdown/Rmarkdown
<b>Quantitative Research</b>	General and Generalised Linear Models, Linear Mixed Effects Models, PCA
<b>Software</b>	R, RStudio, Praat, Audacity, InkScape, Mendeley, Zotero
<b>Languages</b>	English/Spanish (native)

## Research Areas

- Human voice
- Vocal modulation
- Mate choice
- Human behaviour
- Hormones and behaviour

## Education

### University of Stirling

PHD - PSYCHOLOGY

- Dissertation Title: "Contextual musicality: vocal modulation and its perception in human social interaction".
- Supervisors: Prof. S. Craig Roberts, and Prof. Anthony C. Little.
- Committee members: Prof. Phyllis C. Lee (dissertation chair), and Prof. Stuart Semple.

Stirling, UK

2014

### University of Liverpool

MSC IN EVOLUTIONARY PSYCHOLOGY

- Supervisor: Prof. S. Craig Roberts.
- Best overall performance in the MSc.

Liverpool, UK

2009

## Universidad Pedagógica Nacional

BA IN MUSIC PEDAGOGY

- GPA: 4.28/5.00.
- Research project: 4.90/5.00

Bogota, Colombia

2006

## Working Experience

### Universidad El Bosque

ASSOCIATE PROFESSOR

- Researcher at the Human Behaviour Analysis Lab (LACH).
- Leader of the Cognitive Processes and Education research group (Procesos Cognoscitivos y Educación) (since 2016).
- Supervision of a variety of undergraduate research projects associated with psychology and biology.
- Member of the Research Committee.
- Member of the Advisory Committee on Research Ethics.

Bogota, Colombia

Apr. 2019 - Present

### Universidad El Bosque

ASSISTANT PROFESSOR

- Researcher at the Human Behaviour Analysis Lab (LACH).
- Methodological and statistical advisor for postgraduate and faculty research projects.
- Leader of the Cognitive Processes and Education research group (Procesos Cognoscitivos y Educación) (since 2016).
- Organiser of the Nerd Café weekly conference series of the Faculty of Psychology (2016-2017).
- Supervision of a variety of undergraduate research projects associated with psychology and biology.
- Postdoctoral stay (2018-2019).
- Co-supervision of Doctoral Students: Milena Vásquez-Amézquita (PhD in Neuroscience, University of Valencia, Spain – 2015-2018).

Bogota, Colombia

Jan. 2015 - Apr. 2019

### Universidad de La Sabana

CATHEDRATIC PROFESSOR

- Teaching and supervision of research projects.

Chia, Colombia

Jan. 2015 - Dec. 2016

### University of Stirling

TEACHING ASSISTANT

- Supervision of an MSc research project (Evolutionary Psychology MSc).
- Marking and statistical advice to MSc students.

Stirling, UK

2011 - 2014

### Universidad Pedagógica Nacional

AUXILIAR PROFESSOR

- Member of the Research Committee.
- Supervision of research projects.

Bogota, Colombia

2010

## Teaching Experience

### Universidad El Bosque

ASSOCIATE PROFESSOR

- Quantitative Methods II (Psychology MSc).

Bogota, Colombia

2017 - Present

### Universidad El Bosque

ASSISTANT PROFESSOR

- Quantitative Methods I (Psychology MSc).

Bogota, Colombia

2017

### Universidad El Bosque

ASSISTANT PROFESSOR

- Research Degree Project.

Bogota, Colombia

2018

### Universidad El Bosque

ASSISTANT PROFESSOR

- Sources and Documentation Styles in Psychology.

Bogota, Colombia

2015

### Universidad de La Sabana

CATHEDRATIC PROFESSOR

- Evolution and Development of Vocal Communication: Songs, Fashion, and Language.

Chia, Colombia

2016

### Universidad de La Sabana

CATHEDRATIC PROFESSOR

- Inferential Statistics.
- Descriptive Statistics).

Chia, Colombia

2015 - 2016

## University of Stirling

TEACHING ASSISTANT

- Animal Behaviour (lecture on vocal communication).

Stirling, UK

2012

## University of Stirling

TEACHING ASSISTANT

- Quantitative Methods (Psychology MSc – several lectures, practical supervision, one-on-one teaching).
- Cognition Module (leading research projects in psychoacoustics).

Stirling, UK

2012-2014

## Universidad Pedagógica Nacional

AUXILIAR PROFESSOR

- Research Project I.
- Research Lab II.

Bogota, Colombia

2010

## Scholarships, Awards and Honors

### Universidad El Bosque

VIII EXCELLENCE AWARDS

- COP\$7.000.000

Bogota, Colombia

Dic. 2019

### Universidad El Bosque

VII EXCELLENCE AWARDS

- COP\$5.000.000

Bogota, Colombia

Dic. 2018

### Universidad El Bosque

VI EXCELLENCE AWARDS

- COP\$5.000.000

Bogota, Colombia

Dic. 2017

### Experimental Psychology Society

GRINDLEY GRANTS

Canterbury, UK

Sep. 2014

### Colciencias

FRANCISCO JOSÉ DE CALDAS SCHOLARSHIP FOR DOCTORAL STUDIES

Bogota, Colombia

Oct. 2010 - Oct. 2014

### School of Life Sciences – University of Liverpool

ANNUAL PRIZE IN EVOLUTIONARY PSYCHOLOGY

- Best overall performance in the MSc.

Liverpool, UK

Oct. 2009

### University of Liverpool

UNIVERSITY OF LIVERPOOL INTERNATIONAL SCHOLARSHIP

Liverpool, UK

Sep. 2008 - Sep. 2009

### Colfuturo

SCHOLARSHIP-LOAN PROGRAMME

Bogota, Colombia

Sep. 2008 - Sep. 2009

## Grants

### Colciencias

POSTDOCTORAL RESEARCH STAYS - COLCIENCIAS BENEFICIARIES 2017

- Project: Perceptible signals of physical and mental health in faces, voices and body odors, and their relationship with hormonal levels
- COP\$84.000.000

Bogota, Colombia

Jan. 2018 - Jan. 2019

### Universidad El Bosque

IX INTERNAL CALL FOR FINANCING RESEARCH AND TECHNOLOGICAL INNOVATION PROJECTS EL BOSQUE UNIVERSITY, 2017

- Project: Perceptible signals of physical and mental health in faces, voices and body odors, and their relationship with hormonal levels
- COP\$136.586.537

Bogota, Colombia

Jan. 2018 - Dec. 2021

### Universidad El Bosque

VIII INTERNAL CALL FOR FINANCING RESEARCH AND TECHNOLOGICAL INNOVATION PROJECTS EL BOSQUE UNIVERSITY, 2016

- Project: Effects of evolutionary relevant static signals (sex, dominance, and attractiveness) on the cortical processing of human faces
- COP\$80.000.000

Bogota, Colombia

Jan. 2017 - Dec. 2020

### Universidad El Bosque

VII INTERNAL CALL FOR FINANCING RESEARCH AND TECHNOLOGICAL INNOVATION PROJECTS EL BOSQUE UNIVERSITY, 2015

- Project: Efectos de los niveles hormonales, masculinidad y feminidad, en la discriminación tonal en hombres y mujeres
- COP\$13.000.000

Bogota, Colombia

Jan. 2016 - Dec. 2019

## PREPRINTS AND ARTICLES UNDER REVIEW

- Jones, B. C., DeBruine, L. M., Flake, J. K., Aczel, B., Adamkovic, M., Alaei, R., Alper, S., Solas, S. Á., Andreychik, M. R., Ansari, D., Arnal, J. D., Babinčák, P., Balas, B., Baník, G., Krystian, Barzykowski, Baskin, E., Batres, C., Beaudry, J. L., ... Chartier, C. R. (accepted-). To which world regions does the valence-dominance model of social perception apply? *Nature Human Behaviour*. <https://doi.org/10.31234/osf.io/n26dy>
- Kleisner, K., Tureček, P., Roberts, S. C., Havlicek, J., Varella Valentova, J., Akoko, R. M., **Leongómez, J. D.**, Apostol, S., Varella, M. A. C., & Saribay, S. A. (2020). How and why patterns of sexual dimorphism in human faces vary across the world. *PsyArXiv*. <https://doi.org/10.31234/osf.io/7vdmB>
- Leongómez, J. D.**, Sánchez, O. R., Vásquez-Amézquita, M., & Roberts, S. C. (2020). Contextualising courtship: Exploring male body odour effects on vocal modulation. *PsyArXiv*. <https://doi.org/10.31234/osf.io/8f7g3>
- Martínez, C. A., & **Leongómez, J. D.** (2019). Dehumanization Effects on Agency Attributions, Retributive Justice judgments, and Resocialization Attitudes towards Former Perpetrators in Post-conflict. *PsyArXiv*. <https://doi.org/10.31234/osf.io/w5tka>

## JOURNAL ARTICLES

- Leongómez, J. D.**, Sánchez, O. R., Vásquez-Amézquita, M., Valderrama, E., Castellanos-Chacón, A., Morales-Sánchez, L., Nieto, J., & González-Santoyo, I. (2020). Self-reported health is related to body height and waist circumference in rural indigenous and urbanised latin-american populations. *Scientific Reports*, 10(1), 4391. <https://doi.org/10.1038/s41598-020-61289-4>
- Bonilla, F. M., & **Leongómez, J. D.** (2019). Efectos de la expresión emocional y de la orientación del rostro sobre las respuestas conductuales y el componente N170. *Psychologia*, 13(2), 95–106. <https://revistas.usb.edu.co/index.php/Psychologia/article/view/3473>
- Vásquez-Amézquita, M., **Leongómez, J. D.**, Seto, M. C., Bonilla, F. M., Rodríguez-Padilla, A., & Salvador, A. (2019). Visual Attention Patterns Differ in Gynephilic and Androphilic Men and Women Depending on Age and Gender of Targets. *Journal of Sex Research*, 56(1), 85–101. <https://doi.org/10.1080/00224499.2017.1372353>
- Vásquez Amézquita, M., **Leongómez, J. D.**, Seto, M. C., & Salvador, A. (2019). Differences in Visual Attention Patterns to Sexually Mature and Immature Stimuli Between Heterosexual Sexual Offenders, Nonsexual Offenders, and Nonoffending Men. *Journal of Sex Research*, 56(2), 213–228. <https://doi.org/10.1080/00224499.2018.1511965>
- Watkins, C. D., **Leongómez, J. D.**, Bovet, J., Żelaźniewicz, A., Korbmacher, M., Corrêa Varella, M. A., Fernandez, A. M., Wagstaff, D., & Bolgan, S. (2019). National income inequality predicts cultural variation in mouth to mouth kissing. *Scientific Reports*, 9, 6698. <https://doi.org/10.1038/s41598-019-43267-7>
- Culpepper, P. D., Havlíček, J., **Leongómez, J. D.**, & Roberts, S. C. (2018). Visually Activating Pathogen Disgust: A New Instrument for Studying the Behavioral Immune System. *Frontiers in Psychology*, 9, 1397. <https://doi.org/10.3389/fpsyg.2018.01397>
- Danel, D. P., Valentova, J. V., Sánchez, O. R., **Leongómez, J. D.**, Corrêa Varella, M. A., & Kleisner, K. (2018). A cross-cultural study of sex-typicality and averageness: Correlation between frontal and lateral measures of human faces. *American Journal of Human Biology*, 30(5), e23147. <https://doi.org/10.1002/ajhb.23147>
- Vásquez-Amézquita, M., **Leongómez, J. D.**, Seto, M. C., Bonilla, F. M., Rodríguez-Padilla, A., & Salvador, A. (2018). No relation between digit ratio (2D:4D) and visual attention patterns to sexually preferred and non-preferred stimuli. *Personality and Individual Differences*, 120, 151–158. <https://doi.org/10.1016/j.paid.2017.08.022>
- Bonilla, F. M., & **Leongómez, J. D.** (2017). Efectos en la amplitud y la latencia del componente N170 ante la presentación de rostros emocionales de ira y miedo. *Psychologia*, 11(1), 39–48. <https://doi.org/10.21500/19002386.3100>
- Leongómez, J. D.**, Mileva, V. R., Little, A. C., & Roberts, S. C. (2017). Perceived differences in social status between speaker and listener affect the speaker's vocal characteristics. *PLoS One*, 12(6), e0179407. <https://doi.org/10.1371/journal.pone.0179407>

- Cobey, K. D., Nicholls, M., **Leongómez, J. D.**, & Roberts, S. C. (2015). Self-reported Dominance in Women: Associations with Hormonal Contraceptive use, Relationship Status, and Testosterone. *Adaptive Human Behavior and Physiology*, 1(4), 449–459. <https://doi.org/10.1007/s40750-015-0022-8>
- Leongómez, J. D.** (2015). La música como objeto de estudio científico: consideraciones en torno a la musicalidad y el origen de la música. *Pensamiento Palabra Y Obra*, 13, 77–86. <https://doi.org/10.17227/2011804X.15PP077.86>
- Leongómez, J. D.** (2014). *Contextual musicality: vocal modulation and its perception in human social interaction* [PhD, University of Stirling]. <https://doi.org/10.13140/RG.2.2.36521.39520>
- Leongómez, J. D.**, Binter, J., Kubicová, L., Stolařová, P., Klapilová, K., Havlíček, J., & Roberts, S. C. (2014). Vocal modulation during courtship increases perceptivity even in naive listeners. *Evolution and Human Behavior*, 35(6), 489–496. <https://doi.org/10.1016/j.evolhumbehav.2014.06.008>
- Binter, J., **Leongómez, J. D.**, Moyano, N., Valentova, J., Jouza, L., & Klapilová, K. (2012). Sex differences in the incidence of sexual fantasies focused on evolutionary relevant objects. *Anthropologie*, 50(1), 83–93. <http://puvodni.mzm.cz/Anthropologie/article.php?ID=1413>
- Ferdenzi, C., Lemaître, J.-F., **Leongómez, J. D.**, & Roberts, S. C. (2011). Digit ratio (2D:4D) predicts facial, but not voice or body odour, attractiveness in men. *Proceedings of the Royal Society B: Biological Sciences*, 278(1724), 3551–3557. <https://doi.org/10.1098/rspb.2011.0544>
- Leongómez, J. D.** (2009). *Variation of pitch and loudness range of human voice in response to intra- and inter-sexual stimuli* [MSc]. University of Liverpool.
- Leongómez, J. D.** (2008). El origen no humano de la música. (*Pensamiento*), (*Palabra*) Y *Obra*, 1(1), 87–97. <https://revistas.pedagogica.edu.co/index.php/revistafba/article/view/50>

#### DIVULGATION ARTICLES

- Mileva, V. R., & **Leongómez, J. D.** (2017). We change our voice when we talk to high-status people, shows new study. *The Conversation*. <https://shorturl.at/FL015>
- Mileva, V. R., & **Leongómez, J. D.** (2018). Want to know if your partner's cheating on you? Just listen to their voice. *The Conversation*. <https://shorturl.at/fhlHK>

## Investigación Abierta (YouTube channel)

**Investigación Abierta** is a YouTube channel (in Spanish) where I post videos and tutorials related to quantitative research methods and open science, as well as useful open source software.

- Leongómez, J. D.** (2020). Introducción a OBS Studio [Video]. In *Investigación Abierta (YouTube channel)*. <https://jdleongomez.info/es/post/obs/>
- Leongómez, J. D.** (2020). Introducción a jamovi [Video en 2 partes]. In *Investigación Abierta (YouTube channel)*. <https://jdleongomez.info/es/post/jamovi/>

## Conference Presentations, Posters and Workshops

- Leongómez, J.D.** & Sánchez, O. R. (2019, September). *Association between height and waist circumference with health in rural indigenous and urban populations in Latin America*. Paper presented at the XXV Institutional Research Congress (Universidad El Bosque), Bogotá, Colombia.
- Leongómez, J.D.**, Sánchez, O.R., Vásquez-Amézquita, M., Valderrama, E., Castellanos-Chacón, A., Morales-Sánchez, L., Nieto, J., & González-Santoyo, I. (2019, August). *Self-reported Health is Related to Body Height and Waist Circumference in Rural Indigenous and Urbanised Latin-American Populations*. Paper presented at the VII Summer Institute of the International Society for Human Ethology (ISHE), Zadar, Croatia.
- Leongómez, J.D.** (2019, June). *Experimental Designs*. Workshop at the Vicerectory of Research (Universidad El Bosque), Bogotá, Colombia.
- Leongómez, J.D.**, Murray, A.K., & Roberts, S.C. (2018, September). *Contextualising courtship: male body odour effects on vocal modulation*. Paper presented at the XXIV Biannual Conference for Human Ethology (ISHE),

Santiago, Chile.

- Leongómez, J.D.** (2017, September). *Effects of hormonal levels, masculinity and femininity, on men's and women's pitch discrimination*. Paper presented at the XXIII Institutional Research Congress (El Bosque University), Bogotá, Colombia.
- Leongómez, J.D.** (2017, August). *The sound of seduction: Vocal modulations and their effects during courtship*. Plenary session at the 2nd Symposium of Neurosciences, Cognition and Society (Javeriana University), Bogotá, Colombia.
- Leongómez, J.D.** (2017, March). *Is the relationship between musical and linguistic processing a vestige of the evolutionary origins of music?*. Plenary session at the 2017 Brain Awareness Week 2017 (El Bosque University), Bogotá, Colombia.
- Leongómez, J.D.,** Mileva, V.R., Little, A.C., & Roberts, S.C. (2016, August). *Perceived differences in social status between speaker and listener affect the speaker's vocal characteristics*. Paper presented at the XXIII Biennial Congress On Human Ethology (ISHE), Stirling, UK.
- Leongómez, J.D.,** Binter, J., Kubicová, L., Stolařová, P., Klapilová, K., Havlíček, J., & Roberts, S.C. (2014, April). *Vocal modulation during courtship increases proceptivity even in naive listeners*. Paper presented at the European Human Behaviour and Evolution Association (EHBEA) Annual Meeting 2014 (University of Bristol), Bristol, UK.
- Leongómez, J.D.,** & Roberts, S.C. (2013, April). *The sound of sweet nothings: How men and women modulate vocal parameters in speech directed towards attractive and unattractive individuals*. Oral presentation for the Mind and Brain Group (University of Stirling), Stirling, UK.
- Leongómez, J.D.,** & Roberts, S.C. (2013, March). *The sound of sweet nothings: How men and women modulate vocal parameters in speech directed towards attractive and unattractive individuals*. Poster presented at the European Human Behaviour and Evolution Association (EHBEA) Annual Meeting 2013 (VU University Amsterdam), Amsterdam, Netherlands.
- Leongómez, J.D.** (2013, March). *Voice research techniques using Praat*. Workshop at the Faculty of Humanities (Charles University), Prague, Czech Republic.
- Leongómez, J.D.** (2013, March). *Acoustic Communication*. Oral presentation at the Centre for Theoretical Study, Prague, Czech Republic.
- Leongómez, J.D.,** & Roberts, S.C. (2012, May). *The sound of sweet nothings: How men and women modulate vocal parameters in speech directed towards attractive and unattractive individuals*. Oral presentation for the Group of Human Ethology (Charles University), Prague, Czech Republic.
- Leongómez, J.D.** (2013, March). *Voice research techniques using Praat*. Workshop at the Scottish Universities Psychology Postgraduate Research Training – SUPPORT (University of Stirling), Stirling, UK.
- Leongómez, J.D.,** & Roberts, S.C. (2011, February). *The sound of sweet nothings: How men and women modulate vocal parameters in speech directed towards attractive and unattractive individuals*. Oral presentation for the Behaviour and Evolution Research Group (University of Stirling), Stirling, UK.
- Leongómez, J.D.,** & Roberts, S.C. (2010, December). *Context-dependant modulation of vocal parameters*. Poster presented at The Language of Music, the Music of Language; Meeting 2: Entrainment/Meaning (Centre for Music & Science, University of Cambridge), Cambridge, UK.

## Postgraduate and undergraduate Supervision

### Postgraduate

PHD IN NEUROSCIENCE

- Milena Vásquez-Amézquita. Supervised together with Alicia Salvador.

University of Valencia, Spain

2015 - 2018

### Postgraduate

PROFESSIONAL DOCTORATE IN COUNSELLING PSYCHOLOGY

- Francisco Javier Flores. Supervised together with Lisa Chiara Fellin.

University of East London, UK

2015 - 2018



## Postgraduate

PSYCHOLOGICAL RESEARCH METHODS (EVOLUTIONARY PSYCHOLOGY) MSc

- Julia Sanz-Vidania. Supervised together with S. Craig Roberts.

University of Stirling, UK

2013 - 2014

## Postgraduate

MSc IN PSYCHOLOGY

- Adrián Acosta Guerrero. Supervised together with Milena Vásquez-Amézquita.

Universidad El Bosque

2019 - 2020

## Undergraduate

PSYCHOLOGY

- Andrés Castellanos-Chacón (2017 - 2018; teaching supervision 2019 - Present).
- Paula Andrea Betancourt Velandia (2018 - 2019).
- Ana Sofía Gómez Castelblanco (2018 - 2019).
- Lina María García Hoyos (2016 - 2017).
- Angie Liliana Pérez Rodríguez (2016 - 2018).
- Lina María Morales Sánchez (2016 - 2017).
- Laura Milena Estupiñán Aldana (2016 - 2017).
- Vanesa Díaz Güiza (2016 - 2018).
- Cindy Paola Moncada Gómez (2016 - 2017).
- Haydn Ricardo Roldán Morales (2015 - 2016).

Universidad El Bosque

Since 2015

## Undergraduate

BIOLOGY

- Maria Alejandra Abello Mozo (2017 - 2018).

Universidad El Bosque

2017 - 2018

## Undergraduate

MUSIC PEDAGOGY

- Natalia Elizabeth Moreno Buitrago.
- Juan Felipe Pérez Ariza.

Universidad Pedagógica Nacional

2017 - 2019

# Editorial Appointments

My verified review record is available from my **Publons** profile.

## Editorial Boards

REVIEW EDITOR

- Specialty section on Evolutionary Psychology

Frontiers in Psychology

2019 - Present

## Ad Hoc Reviewer

JOURNALS INCLUDE

- Proceedings of the Royal Society B: Biological Sciences
- Basic and Applied Social Psychology
- Royal Society Open Science
- Journal of Nonverbal Behavior
- Frontiers in Psychology
- Human Ethology Bulletin

Journals

Since 2013

## Academic Reviewer

PUBLICATION EVALUATION

- Colciencias
- Universidad Nacional de Colombia

Colombian Institutions

Since 2015

# Memberships

## CURRENT

- International Society for Human Ethology (ISHE)
- Association for Psychological Science (APS)

## PAST

- European Human Behaviour and Evolution Association (EHBEA)