

# RODRIGO DAL BEN DE SOUZA

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Cumming School of Medicine  
University of Calgary  
Calgary, AB  
Canada

## RESEARCH INTERESTS

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Health data, developmental science, research software, reproducible data analysis, quantitative methods, open science.

## EXPERIENCE

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- Senior Research Analyst** 2024 - present  
Cumming School of Medicine, University of Calgary, Canada  
Focus: Health economics data, sustainable data management practices, reproducible analytical pipelines for multinational projects
- Data Scientist (on-call)** 2023 - 2025  
Bee Touch – Workforce Mental Health, Remote  
Focus: Quantitative metrics, Data Wrangling and Visualization, Statistical and ML models, Report to Stakeholders and Scientific Community
- Assistant Professor** 2023 - 2024  
Ambrose University, Calgary, Canada, Psychology  
Main courses: Research Methods, Quantitative Data Analysis, Child Development
- Postdoctoral Fellow** 2022 - 2023  
Ambrose University, Calgary, Canada, Psychology  
Teaching focused: Research Methods, Data Analysis, Child Development  
Supervisor: Joel Thiessen
- Postdoctoral Fellow** 2020 - 2021  
Concordia University, Montreal, Canada, Psychology  
Project: Open Science Practices in Infant Research  
Supervisor: Krista Byers-Heinlein
- International Postdoctoral Research Associate** 2020 - 2020  
Concordia University, Psychology, Remote  
Project: Open Science Practices in Infant Research  
Supervisor: Krista Byers-Heinlein

## EDUCATION AND RESEARCH TRAINING

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- Professional Certificate** 2020 - 2022  
Harvard University, edX, Data Science  
Topics: R, visualization, probability, inference, modeling, version control, data wrangling, machine learning
- Ph.D.** Universidade Federal de São Carlos, Brazil, Psychology 2016 - 2020  
Dissertation: Speech Segmentation and Word Learning in Parallel  
Emphasis: Developmental Psychology  
Advisor: Débora de Hollanda Souza;  
Co-advisor: Jessica F. Hay
- Research Internship** 2018 - 2019  
University of Tennessee, Knoxville, Psychology  
Topics: developmental research, eye-tracking, online research, natural speech analysis, data analysis  
Supervisor: Jessica F. Hay
- M.A.** Universidade Federal de São Carlos, Brazil, Psychology 2014 - 2016  
Thesis: Effects of Vocal Model and Planned Consequences on Children's Descriptions  
Emphasis: Behavior Analysis  
Advisor: Antônio Celso de Noronha Goyos
- B.A.** Centro Universitário Filadélfia, Brazil, Psychology 2009 - 2013  
Honours: Publication Trends in the Analysis of Verbal Behavior  
Emphasis: Behavior Analysis  
Advisor: Marcos Roberto Garcia

## JOURNAL ARTICLES

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19. Marshall, D. A., **Dal Ben, R.**, Currie, G. R., Yeung, R. S. M., Vastert, S. J., Wulffraat, N., Swart, J. F., Benseler, S. (on behalf of UCAN CAN-DU) (2026). Work productivity and activity impairment in patients under 18 with juvenile idiopathic arthritis (JIA): The international UCAN CAN-DU prospective study. *Arthritis Research & Therapy*, 28(1), 106. <https://doi.org/10.1186/s13075-026-03785-y>
18. ManyBabies Consortium, with **Dal Ben, R.** and 20+ others. (2024). A Unified Approach to Demographic Data Collection for Research with Young Children Across Diverse Cultures. *Developmental Psychology*, 60 (2), 211–227. doi: <https://doi.org/10.1037/dev0001623>. PsyArXiv: <https://psyarxiv.com/agt3d/>
17. **Dal Ben, R.**, Prequero, I. T., Souza, D. H., & Hay, J. (2023). Speech segmentation and cross-situational word learning in parallel with Brazilian-Portuguese speakers. *Open*

- Mind*, 7, 510–533. doi: [https://doi.org/10.1162/opmi\\_a\\_00095](https://doi.org/10.1162/opmi_a_00095). PsyArXiv: <https://psyarxiv.com/pf4nr/>
16. Gonzalez, A. M., **Dal Ben, R.**, Killam, H., & Byers-Heinlein, K. (2023). Word learning in 14-month-old monolinguals and bilinguals: Challenges and methodological opportunities. *Language Development Research*, 3 (1), 277–317. doi: <https://doi.org/10.34842/3vw8-k253>. PsyArXiv: <https://psyarxiv.com/5dvx8/>
  15. /L+/ Team, with **Dal Ben, R.**, and 20+ others (2023). Towards Diversifying Early Language Development Research: First Truly Global International Summer/Winter School on Language Acquisition (/L+) 2021. *Journal of Cognition and Development*. doi: <https://doi.org/10.1080/15248372.2023.2231083>. PsyArXiv: <https://osf.io/a3dy8/>
  14. ManyBabies Consortium, with **Dal Ben, R.** and 20+ others. (2023). Validation of an open source, remote web-based, eye-tracking method (WebGazer) for research in early childhood. *Infancy*, 29 (3), 31–55. doi: <https://doi.org/10.1111/infa.12564>. PsyArXiv: <https://psyarxiv.com/7924h/>
  13. **Dal Ben, R.** (2023). SHINE\_color: controlling low-level properties of colorful images. *MethodsX*, 11, 102377. doi: <https://doi.org/10.1016/j.mex.2023.102377>. PsyArXiv: <https://psyarxiv.com/fec6x/>
  12. **Dal Ben, R.**, Souza, D. H., & Hay, J. (2022). Combining statistics: The effects of phonotactics on cross-situational word learning. *Psychology: Research and Review*, 35, 30. <https://doi.org/10.1186/s41155-022-00234-y>. PsyArXiv: <https://psyarxiv.com/3x6uk/>
  11. **Dal Ben, R.**, Killam, H., Pour Iliaei, S., & Byers-Heinlein, K. (2022). Bilingualism affects infant cognition: Insights from new and open data. *Open Mind*, 6, 88–117. [https://doi.org/10.1162/opmi\\_a\\_00057](https://doi.org/10.1162/opmi_a_00057). PsyArXiv: <https://doi.org/10.31234/osf.io/ex76a>
  10. **Dal Ben, R.**, Brouillard, M, Gonzalez-Barrero, A. M., Killam, H., Kremin, L. V., Quirk, E., Sander-Montant, A., Schott, E., Tsui, R. K., & Byers-Heinlein, K. (2022). How open science can benefit bilingualism research: A lesson in six tales. *Bilingualism: Language and Cognition*, 1–8. <https://doi.org/10.1017/S1366728922000256>. PsyArXiv: <https://psyarxiv.com/2tmdr/>
  9. Visser, I., ... **Dal Ben, R.** and 26+ others (2022 – Commentary). Improving the generalizability of infant psychological research: The ManyBabies model. *Behavioral and Brain Sciences*, 45, e35. <https://doi.org/10.1017/S0140525X21000455>. PsyArXiv: <https://psyarxiv.com/8vwbf/>
  8. **Dal Ben, R.**, Souza, D. H., & Hay, J. (2021). When statistics collide: The use of transitional and phonotactic probability cues to word boundaries by Brazilian-Portuguese adults. *Memory & Cognition*, 49, 1300–1310.

<https://doi.org/10.3758/s13421-021-01163-4>. Material and data available at:  
<https://osf.io/s9thk/>

7. **Dal Ben, R.**, & Goyos, C. (2019). Further evidence of automatic reinforcement effects on verbal form. *The Analysis of Verbal Behavior*, 35(1), 74–84.  
<https://doi.org/10.1007/s40616-018-0104-3>. Material and data available at:  
<https://osf.io/pv7xa/>
6. **Dal Ben, R.**, & Goyos, C. (2017). Authorship Trends in The Analysis of Verbal Behavior: 1982–2016. *The Analysis of Verbal Behavior*, 33(1), 117–138.  
<https://doi.org/10.1007/s40616-017-0076-8>
5. **Dal Ben, R.**, Calixto, F. C., & Ferreira, A. L. (2017). Are Brazilian Behavior Analysts Publishing Outside the Box? A Survey of General Science Media. *Behavior Analysis in Practice*, 10(3), 270–278. <https://doi.org/10.1007/s40617-016-0152-x>
4. Silva, F. S. e, Panosso, M. G., **Dal Ben, R.**, & Gallano, T. P. (2017). Métodos de avaliação de itens de preferência para a identificação de reforçadores. *Revista Brasileira de Terapia Comportamental e Cognitiva*, 19(2), 89–107.  
<https://doi.org/10.31505/rbtcc.v19i2.1034>  
[Title translation: Preference Assessment for Identifying Reinforcers]
3. **Dal Ben, R.** (2017). O que nos motiva: uma resenha crítica do livro Payoff. *Perspectivas Em Análise Do Comportamento*, 08(02), 180–185.  
<https://doi.org/10.18761/PAC.2017.001>  
[Title translation: Book Review: Payoff – what motivates us]
2. **Dal Ben, R.**, Camargo, J., Melo, C. M. de, & Figueiras, G. B. (2016). Análise do Comportamento e Sustentabilidade: Revisão dos artigos publicados no Behavior and Social Issues de 2005 a 2016. *Revista Brasileira de Análise Do Comportamento*, 12(2), 86–94. <http://dx.doi.org/10.18542/rebac.v12i2.4401>  
[Title translation: Behavior Analysis and Sustainability: Review of the articles published in Behavior and Social Issues from 2005 to 2016]
1. **Dal Ben, R.**, & Juliani, J. (2013) Psicologia e autismo: aspectos teóricos e práticos. *Terra e Cultura*, 56(1), 139–152.  
[Title translation: Psychology and Autism: Theoretical and practical aspects]

## BOOK CHAPTERS

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- Cannistraci, R. A., **Dal Ben, R.**, Karaman, F., Esfahani, S. P., & Hay, J. F. (2019). Statistical Learning Approaches to Studying Language Development. In J. S. Horst & J. von Koss Torkildsen (Eds.), *International Handbook of Language Acquisition* (pp. 51-75). New York, NY: Routledge, [2019] | Series: Routledge: Routledge.  
<https://doi.org/10.4324/9781315110622>

**Dal Ben, R.,** & Calheiros, T. C. (2018). Leituras essenciais em análise do comportamento: um levantamento com editores brasileiros. In N. Kienen, S. R. S. A. Gil, J. C. Luzia, & J. Gamba (Eds.), *Análise do comportamento: Conceitos e aplicações a processos educativos, clínicos e organizacionais* (pp. 85-94). Londrina: UEL.  
[Title translation: Essential Readings in Behavior Analysis: A survey with Brazilian editors]

Juliani, J., & **Dal Ben, R.** (2014). Relato de Experiência: Acompanhante Terapêutico com Adulto Autista. In: M. C. Marquezzine, A. L. O. Coneglian, & J. J. F. Almeida. (Eds.), *Formação de Professores e atuação de pais na educação de alunos com necessidades educacionais especiais* (pp. 131-154). São Carlos: ABPEE.  
[Title translation: Case Study: Caregiver of an autistic adult]

Rosa, N. M. F., & **Dal Ben, R.** (2013). Comportamento Supersticioso: Aspectos Conceituais e Experimentais. In: C. E. Costa, C. R. X. Cançado, D. R. Zamignani, & S. R. S. Arrabal-Gil. (Eds.), *Comportamento em Foco 2* (pp. 69-76). São Paulo: ABPMC.  
[Title translation: Superstitious Behavior: Conceptual and experimental aspects]

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#### REGISTERED REPORTS WITH STAGE 1 ACCEPTANCE PENDING DATA COLLECTION

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ManyBabies Consortium, with **Dal Ben, R.** and 200+ others. (under review – Stage 1 Registered Report). ManyBabies5: A large-scale investigation of the proposed shift from familiarity preference to novelty preference in infant looking time. *Nature Human Behavior*. PsyArXiv: <https://psyarxiv.com/ck3vd/>

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#### PUBLICATIONS UNDER REVIEW AND IN PREPARATION

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Delefrati, V. R. T., Tardem, M. F., **Dal Ben, R.**, & Hübner, M. M. C. (in preparation). *The Emergence of Mands and Tacts in Children with ASD: A conceptual replication*.

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#### RESEARCH SCHOLARSHIP AND AWARDS

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##### **Feasibility of a Virtual Intervention for Culturally and Linguistically Diverse Children at Risk of Autism Spectrum Disorders – Not granted**

PI: Ana Maria Gonzalez-Barrero  
Co-Applicant: Isabel Smith  
Collaborator: Rodrigo Dal Ben  
Agency: Research Nova Scotia (researchNS)  
Program: New Health Investigator  
Funding: \$100,00.00 CAD  
Duration: 2023 – 2025 (2 years)

**Non-adjacent dependency learning: an integrated account from Psycholinguistics, Computational Modeling, and Formalist Theory – Not granted**

PI: Cristina Name

Collaborator: Rodrigo Dal Ben

Agency: National Council for Scientific and Technological Development (Brazil)

Program: International Networks in the Social Sciences

Funding: \$130,00.00 BRL (~ \$25,061.20 USD)

Duration: 2022 – 2024 (2 years)

**Cross-situational word learning: Systematic Review and Meta-analysis**

PI: Rodrigo Dal Ben

Agency: Ambrose University

Program: Ambrose Research Fund

Funding: \$2,750.00 CAD

Duration: 2023 – 2024 (1 year)

**Links between bilingualism and cognition in infancy (rank: 1<sup>st</sup> place) – Declined**

PI: Rodrigo Dal Ben

Supervisor: Krista Byers-Heinlein

Agency: Fonds de recherche du Quebec – Nature et Technologies (FRQNT)

Program: Bourses postdoctorales

Funding: \$90,000.00 CAD

Duration: 2023 – 2025 (2 years)

**Links between bilingualism and cognition in infancy (rank: 1<sup>st</sup> place) – Declined**

PI: Rodrigo Dal Ben

Supervisor: Krista Byers-Heinlein

Agency: Fonds de recherche du Quebec – Société et culture (FRQSC)

Program: Bourses postdoctorales

Funding: \$90,000.00 CAD

Duration: 2022 – 2024 (2 years)

**Bilingualism, social language, and executive functioning in school-age children with autism spectrum disorders (Rank: 1<sup>st</sup> place)**

PI: Ana Maria Gonzalez-Barrero

Co-Applicant: Isabel Smith

Collaborator: Rodrigo Dal Ben

Agency: Social Sciences and Humanities Research Council (SSHRC)

Program: Insight Development Grant

Funding: \$49,243.00 CAD

Duration: 2022 – 2024 (2 years)

**An open phonotactic and orthotactic probabilities calculator**

PI: Rodrigo Dal Ben  
Agency: Ambrose University  
Program: Ambrose Research Fund  
Funding: \$4,551.00 CAD  
Duration: 2022 – 2023 (1 year)

**Open Science practice in infant research**

PI: Krista Byers-Heinlein  
Agency: Concordia University  
Program: Horizon Postdoctoral Fellowship  
Funding: \$76,000 CAD  
Duration: 2020 – 2022 (2 years)

**Speech Segmentation and Word Learning in Parallel**

PI: Rodrigo Dal Ben  
Co-PI: Débora de Hollanda Souza  
Agency: São Paulo Research Foundation  
Program: International Research Internship  
Funding: \$25,830.00 USD  
Duration: 2018 – 2019 (1 year)

**Speech Segmentation and Word Learning in Parallel (Ph.D. scholarship)**

PI: Rodrigo Dal Ben  
Co-PI: Débora de Hollanda Souza  
Agency: São Paulo Research Foundation  
Funding: R\$ 131,552.72 (~ \$24,452.17 USD)  
Duration: 2016 – 2020 (4 years)

**Effects of Vocal Model and Planned Consequences on Children's Descriptions (M.A. scholarship)**

PI: Rodrigo Dal Ben  
Co-PI: Antônio Celso de Noronha Goyos  
Agency: São Paulo Research Foundation  
Funding: R\$ 46,258.98 (~ \$8,598.32 USD)  
Duration: 2014 – 2016 (2 years)

**Travel Grant.** 2<sup>nd</sup> Lancaster International Conference on Infant and Early Child Development, The Leverhulme Trust, 2017

**Senior Student Presenter Grant.** 41<sup>st</sup> Annual Convention of the Association for Behavior Analysis International, Society for the Advancement of Behavior Analysis, 2015

**Research Award Prof. Reynaldo Camargo Neves.** Best undergraduate research project in Psychology, Centro Universitário Filadélfia, 2014

### In progress

Open phonotactic calculator (R, ShinyApp)

*Details:* The calculator take as input any corpus (phonetic or orthographic) and calculate the phonotactic/ortographic probabilities for n-grams (mono, bi, tri ...) on that corpus. The calculator will be publicly distributed as an R package.

### 2023

SHINE\_color: controlling low-level properties of colorful images.

*Details:* An open source MATLAB toolbox designed for controlling low-level properties of colorful images (static or dynamic). Available: [Article](#), [GitHub](#).

### 2020

ManyBabies website major update (HTML, CSS, YAML, Markdown)

*Details:* The ManyBabies website serves as the first stop for new and returning collaborators and offers many resources for researchers interested in infant research. The website is open source (hosted on GitHub pages), written using markdown, yaml, and html (.css) languages, and can be [accessed here](#).

ManyBabies collaborators Shiny map (R, ShinyApp)

*Details:* Interactive map of ManyBabies 247 collaborators from 36 countries, and working in 13 projects. The map was created in R & Shiny Apps and is publicly [available here](#).

### 2019

Lum\_fun: A set of tools to control luminance of colored images (MATLAB)

*Details:* Open source MATLAB script designed for matching luminance of colorful images to be used in pupillometry studies with infants. Available at: <https://osf.io/auzjy/> (Version 0.2)

## CONFERENCE PRESENTATIONS

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*(Selected presentations)*

Prequero, I. T., Ravijts, L., Vernailen, B., **Dal Ben, R.**, Souza, D. H., & Bogaerts, L. (2026, June). *Assessing neural signatures of statistical learning: A meta-analysis of EEG/MEG studies*. Interdisciplinary advances in Statistical Learning, San Sebastián, Spain.

Prequero, I. T., **Dal Ben, R.**, & Souza, D. H. (2025, December). *Conflicting Statistics may hinder speech segmentation: preliminary results from Brazilian-Portuguese native speakers*. Dutch Society for Brain and Cognition Winter Conference, Egmond Ann Zee, The Netherlands.

Prequero, I. T., **Dal Ben, R.**, & Souza, D. H. (2025, November). *Tracking Statistical Learning in the Brain: A narrative review of recent studies*. Neurocog, Brussels, Belgium.

- Fuhrmann A.C., Marshall D.A., **Dal Ben R.**, Currie G.R., Yeung R.S.M., Vastert S.J., et al. (2025, October). *Using a caregiving-specific patient-reported outcome measure to assess the impact of childhood arthritis on parental quality of life*. EuroQol North American Regional Meeting and APERSU 10th Anniversary & End-User Meeting, Canmore, Alberta, Canada.
- Fuhrmann A.C., Marshall D.A., **Dal Ben R.**, Currie G.R., Yeung R.S.M., Vastert S.J., et al. (2025, May). *The impact of caring for juvenile idiopathic arthritis patients on caregivers' quality of life*. Value Health. 2025;28(S1). ISPOR, Montréal, Quebec, Canada.
- Dal Ben R.**, Prequero, I., Souza, D. H. (2025, May). *Neural entrainment to artificial continuous speech with Brazilian-Portuguese native speakers*. Individual Poster Presentation. SRCO 2025 Biennial Meeting, Minneapolis, Minnesota, USA
- Dal Ben R.**, Morin, G., Gonzalez-Barrero, A. (2025, May). *Social communication skills of school-age children: A look at bilingualism*. Individual Poster Presentation. SRCO 2025 Biennial Meeting, Minneapolis, Minnesota, USA
- Marshall D.A., Fuhrmann A.C., **Dal Ben R.**, Currie G.R., Yeung R.S.M., Vastert S.J., et al. (2025, February). *What is the impact of caregiving on quality of life for parents of children with juvenile idiopathic arthritis: the UCAN CAN-DU and CURE International Perspective Study*. Canadian Rheumatology Association 2025 Annual Scientific Meeting, Calgary, Alberta, Canada.
- Marshall D.A., **Dal Ben R.**, Currie G.R., Yeung R.S.M., Vastert S.J., Wulffraat N.M., et al (2025, February). *How does juvenile idiopathic arthritis affect the employment and usual activities of adolescents? The UCAN CAN-DU and CURE International Prospective Study*. Canadian Rheumatology Association Annual Scientific Meeting, Calgary, Alberta, Canada.
- Marshall D.A., **Dal Ben R.**, Currie G.R., Yeung R.S.M., Vastert S.J., Kip M.M., et al (2025, February). *How does juvenile idiopathic arthritis affect the work and usual activities of parent caregivers? The UCAN CAN-DU and CURE International Prospective Study*. Canadian Rheumatology Association Annual Scientific Meeting, Calgary, Alberta, Canada.
- Prequero, I. T., **Dal Ben, R.**, Vilà-Balló, A., & Souza, D. H. (2025). *O papel de dicas estatísticas na segmentação de fala: integrando medidas comportamentais e eletrofisiológicas*. Proceedings of the Simpósio: Realizações e impactos do INCT-ECCE de 2017-2025, São Paulo, Brazil.
- Marshall DA, **Dal Ben R.**, Currie G, Vastert S, Yeung R, Kip M, Swart J, Benseler S on behalf of UCAN CAND-DU and CURE Consortium (2024, November). *Burden of childhood arthritis: Work productivity less and activity impairment of parents and caregivers*. ISPOR Europe, Barcelona, Spain.
- Gonzalez-Barrero, A., Byers-Heinlein, K, **Dal Ben, R.**, Bolibaug, C. (2023, June). *Open science practices in bilingualism research: Insights and lessons from diverse experiences*. Symposia at the 14<sup>th</sup> International Symposium on Bilingualism, Sydney, Australia.
- Dal Ben, R.** (2023, March). *An open phonotactic and orthotactic probabilities calculator*. Oral presentation at Ambrose Research Conference, Calgary, Canada.
- Prequero, I. T., **Dal Ben, R.**, & Souza, D. H. (2022, October). *O papel de regularidades estatísticas na segmentação de fala e mapeamento simultâneo com estímulos visuais*:

- um procedimento go/no-go. Oral presentation at 52<sup>a</sup> Reunião Anual da Sociedade Brasileira de Psicologia. [Title translation: Speech segmentation and cross-situational word learning in parallel: a go/no-go design]
- Dal Ben, R.**, Killam, H., Iliaei, S., & Byers-Heinlein, K. (2022, July). *Bilingualism affects infant cognition: Insights from new and open data*. Oral presentation at the International Conference on Infant Studies, Ottawa, Canada.
- /L+/ Team, with Garcia, R., ... **Dal Ben, R.**, and 22+ others (2022, July). *Western Biases in Infant Research: The state of the field and strategies for change*. Poster presentation at the International Conference on Infant Studies, Ottawa, Canada.
- Dal Ben, R.** (2022, May) *Speech segmentation and cross-situational word learning in parallel*. Oral presentation at the Oncoto – Proncovo: Rumos do INCT-ECCE Conference, Sao Carlos, Brazil.
- ManyBabies Consortium, with Yuen, F., ... **Dal Ben, R.**, and 20+ others (2022, April). *Validation of an open source, web-based, eye-tracking method (WebGazer) for research on cognitive development: Comparison of anticipatory looking behavior in toddlers tested via web-based vs. in-lab eye-tracking*. Oral presentation at Cognitive Development Society Biennial Conference, Madison, USA.
- Dal Ben, R.** (2022, March). *Adjacent probabilities: Do we track statistics to learn new words?* Oral presentation at Ambrose Research Conference, Calgary, Canada.
- Prequero, I. T., **Dal Ben, R.**, Souza, D. H. (2020, October). *O uso de medidas eletrofisiológicas na pesquisa sobre aprendizagem estatística na aquisição de linguagem: uma revisão sistemática*. Poster presented at the 50<sup>th</sup> Reunião Anual da Sociedade Brasileira de Psicologia, Online event, Brazil.  
[Title translation: Electrophysiological measures and statistical language learning: systematic review]
- Prequero, I. T., **Dal Ben, R.**, Souza, D. H. (2019, October). *Efeitos da probabilidade transicional e fonotática na extração de palavras e mapeamento simultâneo com estímulos visuais ao longo de tentativas ambíguas*. Poster presented at the 49<sup>th</sup> Reunião Anual da Sociedade Brasileira de Psicologia, Joao Pessoa, Brazil.  
[Title translation: Effects of transitional and phonotactic probabilities on parallel speech segmentation and cross-situational word learning]
- Dal Ben, R.**, & Souza, D. H. (2019, September). *Looking Out the Window and Back Inside: A Behavioral Explanation of Early Speech Perception*. Talk given at the 10<sup>th</sup> International Conference of the Association for Behavior Analysis International, Stockholm, Sweden.
- Dal Ben, R.**, Souza, D. H., & Hay, J. F. (2019, September). *The Effects of Subtle Pre-Experimental History on Speech Perception*. Poster presented at the 10<sup>th</sup> International Conference of the Association for Behavior Analysis International, Stockholm, Sweden.
- Dal Ben, R.**, Souza, D. H., & Hay, J. F. (2019, June). *Subtle Differences in Phonotactic Probability Affect Speech Processing in Brazilian-Portuguese Adults*. Poster presented at the International Conference on Interdisciplinary Advances in Statistical Learning, Donostia-San Sebastian, Spain.
- Dal Ben, R.**, Souza, D. H., & Hay, J. F. (2019, June). *Cross-situational word learning: a decade of research*. Poster presented at the International Conference on Interdisciplinary Advances in Statistical Learning, Donostia-San Sebastian, Spain.

- Dal Ben, R.,** Souza, D. H., & Hay, J. F. (2019, May). *Subtle Differences in Phonotactic Probability Affect Speech Processing in Brazilian-Portuguese Adults*. Poster presented at the 31<sup>st</sup> Annual Conference of the Association for Psychological Science, Washington, USA.
- Dal Ben, R.,** Souza, D. H., & Hay, J. F. (2017, August). *Speech Segmentation and Cross-Situational Word Learning in Parallel*. Poster presented at the 2<sup>nd</sup> Lancaster International Conference on Infant and Early Child Development, Lancaster, UK.
- Dal Ben, R.** & Calixto, F. C. (2016, May). *Quem somos nós na fila do pão: reflexões não tão profundas sobre a vida na academia*. Talk given at the 14<sup>th</sup> Jornada de Análise do Comportamento da UFSCar, São Carlos, Brazil.  
[Title translation: Our place in the world: not so serious reflections about life in academia]
- Dal Ben, R.** & Goyos, A. C. N. (2015, July). *Efeitos de modelos vocais em voz passiva versus consequências contingentes à voz ativa sobre descrições de crianças pequenas*. Poster presented at 67<sup>a</sup> Reunião Anual da Sociedade Brasileira para o Progresso da Ciência, São Carlos, Brazil.  
[Title translation: Effects of vocal models in passive voice versus active voice contingent consequences on young children descriptions]
- Dal Ben, R.,** Calixto, F. C., & Ferreira, A. L. (2015, July). *Subutilização de uma revista popular de divulgação científica por analistas do comportamento*. Poster presented at 67<sup>a</sup> Reunião Anual da Sociedade Brasileira para o Progresso da Ciência, São Carlos, Brazil.  
[Title translation: Suboptimal use of a popular scientific communication outlet by behavior analysts]
- Dal Ben, R.** & Benatti, L. (2015, May). *A importância da relação entre pesquisa e prestação de serviços em análise do comportamento*. Talk given at the 13<sup>rd</sup> Jornada de Análise do Comportamento da UFSCar, São Carlos, Brazil.  
[Title translation: The importance of close connections between research and application in behavior analysis]
- Dal Ben, R.** & Goyos, A. C. N. (2015, May). *Usos do termo reforçamento automático nas propostas de Skinner sobre o comportamento verbal*. Poster presented at III Jornada de Análise do Comportamento da UEL, Londrina, Brazil.  
[Title translation: Uses of automatic reinforcement in Skinner's explanations of verbal behavior]
- Dal Ben, R.** & Goyos, A. C. N. (2015, May). *Authorship trends in the analysis of verbal behavior: 1982-2013*. Poster presented at 41<sup>st</sup> Annual Convention of the Association for Behavior Analysis International, San Antonio, USA.

## ONGOING RESEARCH PROJECTS

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- Dal Ben, R.,** Estivalet, G. (in progress). *An open phonotactic and orthotactic probabilities calculator*.
- Dal Ben, R.** (in progress). *Systematic Review and Meta-analysis on Cross-situational Word Learning (from 2007 to 2023)*. See [MetaLab](#), for partial results.

**Dal Ben, R.,** Souza, D. H., & Hay, J. (in preparation). *Speech segmentation and cross-situational word learning in parallel with English speakers.*

Shackelford, T., **Dal Ben, R.,** Lany, J., & Hay, J. (in progress). *Pupillometry as a tool to measure statistical learning in infancy.*

## TEACHING AND MENTORSHIP

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### Graduate supervision

Isabella Toselli Prequero (PhD co-supervisor, 2022-present; Universidade Federal de Sao Carlos)

### Mentorship

Ana Fuhrmann, Postdoctoral Associate, University of Calgary – Statistical programming  
Alexia Lee, Honours student, University of Calgary – Statistical programming

### Courses taught

BHS310 – Quantitative Methods for Behavioural Science: Winter 2022, 2023 (Ambrose University)

*Details:* Undergraduate level. Course designed to give students a basic understanding of descriptive and inferential statistics. Emphasis on practical applications, analyses, and interpretation of basic statistical analyses.

PS220 – Child Development: Winter 2023, Fall 2024 (Ambrose University)

*Details:* Undergraduate level. Course designed to give students a foundational understanding of child development, with focus on empirical developmental science and practical case-studies.

BHS240 – Research Methods: Fall 2022 (Ambrose University)

*Details:* Undergraduate level. Course designed to give students a basic understanding of Research methods, including problem definition, literature review, study design, data analyses framework, and scientific reporting.

BHS410 – Basic Multivariate Statistics: Fall 2022, 2023 (Ambrose University)

*Details:* Undergraduate level. Course designed to give students a basic understanding of multivariate statistics. Emphasis on practical applications, analyses, and interpretation of research using multivariate statistics.

PS121 – Introduction to Psychology: Winter 2022, Fall 2022 (Ambrose University)

*Details:* Undergraduate level. An introductory course exploring the nature and process of the human mind and behaviour. A survey of psychological research, physiological processes, basic principles of learning, memory, thinking, language, and intelligence, life-span development issues, personality, psychological disorders and related therapy, and social psychology.

Research Methods in Psychology and Special Education: Spring 2016 (Faculdades Integradas do Vale to Ivaí)

*Details*: Course taught at a graduate level, for students pursuing a specialization in Behavioral interventions for children with developmental disabilities. Students were introduced to research ethics, design (between- vs. within- vs. single-subject), intervention, experimental control, data visualization, and descriptive analyses. Students were mainly Psychologists, Speech Therapists, and Occupational Therapists working with children with developmental disabilities.

Basic Learning Processes: Fall 2015 (Universidade Federal de São Carlos)

*Details*: Course taught at the Psychology undergraduate level. Students were introduced to the principles of respondent (reflex) and operant learning; to the behavioral variation and selection framework (selection by consequences); the concept of repertoire; and to specific procedures such as stimulus pairing, simple and conditional discrimination, shaping, reinforcement, punishment, extinction, behavioral chaining, and stimulus equivalence.

Experimental Analysis of Behavior: Fall 2013 (Faculdade Pitágoras)

*Details*: Course taught at the Psychology undergraduate level. Students were introduced to the behavioral variation and selection framework and were taught the principles of operant learning during experimental laboratory sessions using non-human subjects and the “Skinner box”. Some of the specific procedures taught were: simple and conditional discrimination, shaping, reinforcement, extinction, and behavioral chaining.

### **Guest lectures**

Open Science, Collaboration, Diversity, and Inclusion: Fall 2020 (Concordia University, Montreal)

*Details*: Lecture on how Open Science practices can promote collaboration, diversity, and inclusion in Psychological science. This lecture was part of a course on Open and Reproducible Research in Psychology offered to undergraduate and graduate students.

Psychological Theories on Learning and Development: Fall 2016 and 2017 (Universidade Federal de São Carlos)

*Details*: Lectures on behavioral approaches to learning and development. The lectures covered the classical theories by Pavlov, Watson (methodological behaviorism), and Skinner (radical behaviorism); and also contemporary theories such as Equivalence Relations by Murray Sidman and cols., and Relational Frames Theory by Barnes-Holmes and cols.

Language Development: Fall 2016 and 2017 (Universidade Federal de São Carlos)

*Details*: Lectures on Statistical Language Learning, covering perceptual attunement, speech segmentation, cross-situational word learning, and phonotactics.

### **Workshop & Colloquium**

Navigating career changes while working from home – Summer 2021 (Center for Research on Brain, Language, and Music & Concordia University, Montreal)

*Details:* The colloquium discussed the differences, advantages, and down-sides of changing careers while working remotely. Dr. Dal Ben opened the colloquium presenting his experience when transiting from grad school to a postdoc and from a postdoc to a faculty position.

Running experiments online during the COVID-19 pandemic – Spring 2021  
(Universidade Federal de São Carlos, Brazil)

*Details:* The colloquium discussed research strategies and software that can be used to enable reliable online data collection. Dr. Dal Ben opened the colloquium presenting how he uses *Psychopy* and *Pavlovia* to run behavioral studies remotely and the strategies he uses to ensure participant attentiveness and compliance.

Pre-registering your study: Why, how, and what if? – Fall 2020 (Center for Research on Brain, Language, and Music & Concordia University, Montreal)

*Details:* The workshop covered the process of pre-registering a study, including the reasons and means for doing it, as well as how to deal with deviations from a pre-registration. Researchers at all levels attended the workshop, from undergraduate students to Associate professors.

## SERVICE

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### **Reviewer for journal (ad hoc)**

Infancy  
Languages  
Language Learning  
Infant and Child Development  
Scientific Report  
Trends in Psychology  
Psychology: Research and Review  
Revista Brasileira de Terapia Comportamental e Cognitiva  
[Brazilian Journal of Behavioral and Cognitive Therapy]  
Perspectivas em Análise do Comportamento  
[Perspectives in Behavior Analysis]  
Revista Brasileira de Análise do Comportamento  
[Brazilian Journal of Behavior Analysis]

### **Funding Reviewer (ad hoc)**

ANR – French National Research Agency

### **Book Reviewer (ad hoc)**

MIT Press

### **Scientific Committee**

PsyArXiv – Moderation Chair  
Canadian Poverty Institute – Research Associate

### **Community workshop**

Teaching reading with comprehension to children from low-income families (Fall 2012, Centro Universitário Filadélfia)

### **Campus representative**

Association for Psychological Science, UFSCar – 2018-2019  
Graduate Program in Psychology, UFSCar – 2015-2016

### **Event organization**

/L+/ international summer/winter school on language acquisition – 2023

/L+/ international summer/winter school on language acquisition – 2021

<https://www.dpss.unipd.it/summer-school-2021>

III Symposium on Infant Development at UFSCar: Language development and acquisition – 2017

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## **OTHER SKILLS**

### **Statistics**

Proficient in a wide variety of techniques for statistical analysis, such as linear regression, ANOVA, mixed-effects models (linear, logistic), generalized additive mixed-models (nonlinear relations), Bayesian mixed-models.

### **Programming**

Designing Psychological experiments: Psychtoolbox (MATLAB), Psychopy (Python), Experiment Builder (SR Research)

Designing online experiments: Psychopy (Python) and Pavlovia (GitLab)

Statistical analysis, visualization, wrangling, modeling, reproducible reports: R, R markdown, and Shiny Apps

Version control: git, GitHub, GitLab

Image processing: MATLAB and Python.

Website design: markdown, yaml, html (& css)

### **Languages**

**Portuguese**: Native Language

**English**: Advanced Listener, Advanced Speaker, Advanced Reading and Writing

**Spanish**: Intermediate Listener, Novice Speaker, Intermediate Reading and Writing

**Italian**: Intermediate Listener, Novice Speaker, Intermediate Reading and Writing