

## **Adam R. Fishbein, PhD**

4123 Biology-Psychology Building • College Park, MD 20742 • email: [afishbein87@gmail.com](mailto:afishbein87@gmail.com)

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### **EDUCATION**

- University of Maryland:** College Park, MD  
**Degree:** PhD in Neuroscience and Cognitive Science Aug 2015 – May 2021  
Advisor: Robert Dooling (Psychology)  
Committee Members: Greg Ball (Psychology),  
Juan Uriagereka (Linguistics), Bill Idsardi (Linguistics), Catherine Carr (Biology)
- University of Southern California:** Los Angeles, CA  
**Degree:** Master of Professional Writing, concentration in fiction Aug 2010 – Aug 2012  
Thesis: Short story collection "Leftover People and Other Stories"
- University of Maryland:** College Park, MD  
**Degree:** B.A. Philosophy; B.A. Linguistics Aug 2005 – May 2009  
Graduated Cum Laude

### **RESEARCH AND TRAINING**

- Graduate Research Assistant** July 2015 – May 2021  
Avian Behavioral Neuroscience lab, UMD
- Summer School Course in Acoustic Communication** Aug 2017  
Terrestrial and Marine Field Stations of the Institute of Biology, University of Southern Denmark
- Field Course in Animal Communication** July 2016 – Aug 2016  
Project title: Duetting in Chestnut-Backed Antbirds  
Barro Colorado Island, Panama
- Baggett Summer Research** Summer 2008  
Studied Vocal Mimicry in Satin Bowerbirds, UMD

### **PUBLICATIONS**

- Fishbein, A. R.\***, Prior, N.H.\*, Brown, J.B., Ball, G. F., Dooling, R. J. Discrimination of natural acoustic variation in vocal signals. *Scientific Reports*. 2021.
- Fishbein, A. R.**, Idsardi, W. J., Ball, G. F., Dooling, R. J. Sound sequences in birdsong: how much do birds really care? *Philosophical Transactions of the Royal Society B*. 2020.
- Fishbein, A. R.**, Fritz, J. B., Idsardi, W. J., Wilkinson, G. S. What can animal communication teach us about human language? *Philosophical Transactions of the Royal Society B*. 2020.
- Brown, J. B., Brittan-Powell, E. F., Dooling, R. J., **Fishbein, A. R.**, Ball, G. F., Madison, F. N. Strain differences in hearing in song canaries. *Journal of the Acoustical Society of America*. 2019.
- Fishbein, A. R.**, Lawson, S. L., Dooling, R.J., Ball, G.F. How Canaries Listen to Their Song: Species-Specific Shape of Auditory Perception. *Journal of the Acoustical Society of America*. 2019.
- Fishbein, A. R.**, Löschner, J., Mallon, J. M, Wilkinson, G. S. Dynamic Sex-Specific Responses to Synthetic Songs in a Duetting Suboscine Passerine. *PLOS ONE*. 2018.

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Lawson, S.L., **Fishbein, A. R.**, Prior, N.H., Dooling, R.J., Ball, G.F. Relative Saliency of Syllable Structure and Syllable Order in Zebra Finch Song. *Animal Cognition*. 2018.

### In Preparation

**Fishbein, A. R.** (*in review*) Auditory pattern discrimination in budgerigars (*Melopsittacus undulatus*).

### PRESENTATIONS

**Fishbein, A. R.** How birds perceive auditory sequences and song syllables. (2021) Invited talk at the cognitive and comparative psychology colloquium at the CUNY graduate center.

**Fishbein, A. R.** Lu, K., Liu, W., Idsardi, W. J., Fritz, J.B., Shamma, S.A., Dooling, R.J. (2021). Sequence processing in the auditory forebrain of the zebra finch (*Taeniopygia guttata*) and the budgerigar (*Melopsittacus undulatus*). Poster presented at SfN Global Connectome: A Virtual Event.

**Fishbein, A. R.** Prior, N.H., Ball, G.F., Dooling, R.J. (2020). Limitations in Avian Perception of Vocal Sequences: Implications for Language Evolution. Talk accepted for EvoLang 13, Brussels, Belgium. (Cancelled for Covid-19).

**Fishbein, A. R.** Lu, K., Liu, W., Idsardi, W. J., Fritz, J.B., Shamma, S.A., Dooling, R.J. (2020). Temporal Integration of Sequences in Secondary Auditory Region of the Zebra Finch Forebrain. Poster presented at 43<sup>rd</sup> Annual Meeting of the Association for Research in Otolaryngology, San Jose, CA.

**Fishbein, A. R.**, Prior, N. H., Idsardi, W. J., Ball, G. F., Dooling, R. J. (2019). Perception of Variation in Song Motifs by Birds and Humans. Poster presented at 26<sup>th</sup> International Conference on Comparative Cognition, Melbourne Beach, FL.

**Fishbein, A. R.** Messages in some of the details: How birds listen to auditory sequences. (2019) *Advances in the Study of Bird Perception and Cognition*. University of Tokyo, Komaba, Japan.

**Fishbein, A.R.** Invited talk at the Neuroscience and Cognitive Science program recruitment event. (Feb. 2019).

**Fishbein, A. R.**, Lu, K., Idsardi, W. J., Shamma, S. A., Fritz, J. B., Dooling, R. J. (2019). Neurophysiological Coding of Temporal Fine Structure and Sequence in the Auditory Forebrain of the Zebra Finch. Poster presented at 42<sup>nd</sup> Annual Meeting of the Association for Research in Otolaryngology, Baltimore, MD.

**Fishbein, A. R.**, Prior, N. H., Ball, G. F., Dooling, R.J. (2018). Perception of Sequences and Syllables in Vocal Learning Birds. Presentation at Birdsong and Animal Communication Annual Meeting, Millbrook, NY.

**Fishbein, A. R.**, Prior, N. H., Lawson, S. L., Ball, G. F., Dooling, R. J. (2018). Variation in How Birds Listen to Their Songs. Presentation at 55<sup>th</sup> Annual Conference of the Animal Behavior Society, Milwaukee, WI.

**Fishbein, A. R.**, Ball, G. F., Dooling, R. J. (2018). Use of Transition and Abstract Rules by Budgerigars in Auditory Pattern Processing. Presentation at 175<sup>th</sup> Meeting of the Acoustical Society of America, Minneapolis, MN.

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**Fishbein, A. R.,** Ball, G. F., Dooling, R. J. (2017). Use of Transition and Abstract Rules by Budgerigars in Auditory Pattern Processing. Poster presented at Birdsong 7, College Park, MD.

**Fishbein, A. R.** and Dooling, R. J. (2017). An Efficient Behavioral Assay for Measuring Auditory Pattern Processing in Budgerigars. Poster presented BBI Research Workshop: New Perspectives on Animal Models of Language and Cognition, College Park, MD.

**Fishbein, A. R.,** Löschner, J., Mallon, J. M, Wilkinson, G. S. (2017). Sex-Specific Responses to Synthetic Songs in a Duetting Suboscine Passerine. Presentation at 4<sup>th</sup> International Symposium on Acoustic Communication by Animals, Omaha, NE.

**Fishbein, A. R.** and Dooling, R. J. (2017). An Efficient Behavioral Assay for Measuring Auditory Pattern Processing in Budgerigars. Poster presented at 4<sup>th</sup> International Symposium on Acoustic Communication by Animals, Omaha, NE.

Lawson, S.L., **Fishbein, A. R.,** Prior, N.H., Dooling, R.J., Ball, G.F. (2017) Perception of Structural Changes in Song Motifs by Zebra Finches. Poster presented at 4<sup>th</sup> International Symposium on Acoustic Communication by Animals, Omaha, NE.

**Fishbein, A. R.,** Lawson, S. L., Dooling, R.J., Ball, G.F. (2017). How Canaries Listen to Their Song. Presentation at 173<sup>rd</sup> Meeting of the Acoustical Society of America, Boston, MA.

Lawson, S.L., **Fishbein, A. R.,** Prior, N.H., Lohr, B., Dooling, R.J., Ball, G.F. (2017). Relative Salience of Syllable Order versus Syllable Fine Structure in Zebra Finch Song. Work presented at 173<sup>rd</sup> Meeting of the Acoustical Society of America, Boston, MA.

**Fishbein, A. R.,** Lawson, S. L., Ball, G.F., Dooling, R. J. (2016). Using Operant Conditioning Methods to Measure Song Perception in Birds. Poster presented at 6<sup>th</sup> Meeting of the North American Ornithological Conference, Washington, D.C.

### AWARDS AND HONORS:

<b>Ann G. Wylie Semester Dissertation Fellowship, UMD</b>	2020
<b>Jakob K. Goldhaber Travel Grant, UMD</b>	2020
<b>NRSA Predoctoral F31 Fellowship, NIDCD</b>	2019
<b>NIH Predoctoral Traineeship Fellowship, T32 Grant, CCEBH, UMD</b>	2017
<b>Graduate Student Travel Award, BSOS, UMD</b>	2017
<b>Research Training Award, NACS Program, UMD</b>	2017
<b>Travel Award, NACS Program for First-Year Project, UMD</b>	2016
<b>NSF Research Traineeship Fellowship, Language Science Center, UMD</b>	2016
<b>Assistant Lectureship, USC</b>	2010
<b>Baggett Summer Research Scholarship, UMD</b>	2008
<b>Honors Program Certificate, UMD</b>	2008

### TEACHING EXPERIENCE

<b>Teaching Assistant, LING272 The Biophysics of Language University of Maryland: College Park, MD</b>	Fall 2019
<b>Teaching Assistant, LING272 The Biophysics of Language University of Maryland: College Park, MD</b>	Fall 2018

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**Graduate Fellow**, Pulsar Language Science Research Seminar  
**University of Maryland**: College Park, MD Spring 2017 – Fall 2017

**Lecturer**, ENGL101 (Academic Writing)  
**University of Maryland**: College Park, MD Fall 2014 – Spring 2015

**Lecturer**, LIT/WRTG100, LIT/WRTG101 (College Writing I and II)  
**American University**: Washington, DC Fall 2013 – Spring 2015

**Graduate Lecturer**, WRIT140 (Writing and Critical Reasoning)  
**University of Southern California**: Los Angeles, CA Fall 2010 – Spring 2012

### ADDITIONAL TRAINING

**Statistics with R Specialization**, Coursera Spring 2020

**Practical Data Science with MATLAB Specialization**,  
Mathworks on Coursera Spring 2020

**Independent Study with Lab Research Engineer, Ed Smith** June 2016 – Dec 2016

Matlab, Sound Recording, Signal Analysis

**Introduction to Bayesian Statistical Modeling**, UMD June 2016

**Training in Teaching**, UMD Fall 2014

**Training in Teaching**, USC Fall 2010

### PROFESSIONAL SERVICE

**Chair**, Language Science Professional Development Committee 2017 – 2018

**Co-Chair**, Language Science Lunch Talks Committee 2017

**Member**, Language Science Winter Storm Planning Committee 2017, 2018

**Member**, Language Science Professional Development Committee 2016 – Present

**Member**, Language Science Day Planning Committee 2016

### MENTORSHIP EXPERIENCE

**Mentor for Undergraduate Student**, Delphine Gardiner Sept 2018 – May 2020

**Mentor for Undergraduate Student**, Mahler Revsine May 2018 – Aug 2018

**Graduate Fellow for PULSAR Undergraduate Research Program** Jan 2017 – Dec 2017

**Mentor for Undergraduate Student**, Eli Kane Sept 2017 – Dec 2017

**Mentor for Undergraduate Student**, Janeila Benjamin Mar 2017 – Aug 2017

**Tutor for Study Point**: Washington, DC Aug 2014 – Jan 2015

**Volunteer Tutor at School on Wheels**: Los Angeles, CA Mar 2012 – Sept 2012

**Volunteer Tutor at Los Angeles Mission**: Los Angeles, CA Apr 2012 – Sept 2012

### OUTREACH EXPERIENCE

**Lab Tour for Terp Discovery Students** July 2017

**Maryland Day Table Volunteer**, UMD Apr 2017

**Lunch with Montgomery Blair High School Linguistics Club** Feb 2017

### LAY SCIENCE PUBLICATIONS

Seeds for Thought: Is there Structure in Birdsong? [umdlanguagescience.org](http://umdlanguagescience.org), Mar. 27, 2018.

Birds Can Tell Us a Lot About Human Language. [Scientificamerican.com](http://Scientificamerican.com), Feb 2., 2018.

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How Canaries Listen to Their Song. Popular version of presentation at 173<sup>rd</sup> meeting of the Acoustical Society of America. Acoustics.org. 2017.

### **SKILLS**

**MATLAB:** proficient

**Excel:** proficient

**Adobe Audition:** proficient

**Raven Pro:** proficient

**R:** proficient

**SPSS:** intermediate

**Avisoft:** intermediate

**SAP:** intermediate

### **FICTION PUBLICATIONS AND OTHER ACTIVITIES**

*DreamLand*, Amazon Direct Publishing (2015); "Uncle Camus," *Cactus Heart* (2015); "The Untapped," *The*

*Offbeat* (2015); "Igloo," *Connu* (2013); "Moving In," *Necessary Fiction* (2012); "As A Child," *Stylus* (2009)

Co-Founder and Member, Improv Comedy Group "The Female Accent," Jan 2015 – Present

Member, Washington Improv Theater ensemble "Thank You for Sharing," Apr 2015 – Sept 2016