



## Research Interests

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Bilingualism, code-switching, memory, proactive interference, inhibition, aging, cognitive control, structural MRI, cortical thickness

## Publications

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*Last name changed from McDowell to Macbeth, effective 01/2017.*

**Macbeth, A.**, Higby, E., Atagi, N., & Chiarello, C. (Under review). Evidence for cognitive and brain reserve supporting executive control of memory in lifelong bilinguals.

**Macbeth, A.** & Chiarello, C. (2018). One is all you need: Intrahemispheric processing benefits nonverbal visual recognition. *Laterality: Asymmetries of Body, Brain, & Cognition*, 24, 139-162. doi:10.1080/1357650X.2018.1500582

Felton, A., Vazquez, D., Ramos, A. I., Greene, M. R., **Macbeth, A.**, Hernandez, A.E., & Chiarello, C. (2017). Bilingualism influences structural indices of interhemispheric organization. *Journal of Neurolinguistics*, 42, 1-11. doi:10.1016/j.jneuroling.2016.10.004

Chiarello, C., Vazquez, D., Felton, A., & **McDowell, A.** (2016). Structural asymmetry of the human cerebral cortex: Regional and between-subject variability of surface area, cortical thickness, and local gyrification. *Neuropsychologia*, 93, 365-379. doi:10.1016/j.neuropsychologia.2016.01.012

**McDowell, A.**, Felton, A., Vazquez, D., & Chiarello, C. (2016). Neurostructural correlates of consistent and weak handedness. *Laterality: Asymmetries of Body, Brain & Cognition*, 21, 348-370. doi:10.1080/1357650X.2015.1096939

**McDowell, A.**, Trammell, J., and Krumrei-Mancuso, E. J. (2015). How handedness direction and consistency relate to declarative memory task performance. *Psi Chi Journal of Psychological Research*, 20, 228-235.

## Manuscripts in Preparation

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Montag, J., **Macbeth, A.**, Atagi, N., \*De La Cruz, B., Bruni, M., Erens, J. A., Robbins, M., & Chiarello, C. The electronically activated recorder (EAR): A methodology for capturing the day-to-day linguistic experiences of young adults.

**Macbeth, A.**, Bruni, M., Atagi, N., \*De La Cruz, B. & Chiarello, C. Are language history questionnaires valid? What the EAR tells us about real-world bilingual language use.

## Conference Presentations

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\* *Indicates undergraduate co-authors.*

**Macbeth, A.**, \*De La Cruz, B., Bruni, M., Atagi, N., Montag, J., & Chiarello, C. Predicting real-world language use from language history questionnaires and laboratory assessments of vocabulary and proficiency. (October 2020). Poster presented at the *Society for the Neurobiology of Language 2020 Annual Meeting*. Virtual Format.

\*De La Cruz, B., **Macbeth, A.**, & Chiarello, C. The bilingual experience: Relationships between language use, reading experience, and phonological awareness. (May 2020). Poster presented at the *2<sup>nd</sup> Annual R'Psyc Undergraduate Research Conference*. Riverside, CA.

**Macbeth, A.**, Higby, E., Atagi, N., & Chiarello, C. The effects of bilingualism on resistance to proactive interference and brain integrity across the adult lifespan. (May 2020). Poster presented at the annual meeting of the *Cognitive Neuroscience Society*. Virtual Format.

\*Le, T., \*Conanan, J., **Macbeth, A.**, Higby, E., Atagi, N., & Kroll, J. F. How do early language experiences impact vocabulary in young and older adulthood? (June 2019). Poster presented at the *Symposium on Cognition and Language Development (SoCAL)* at UCLA. Los Angeles, CA.

\*Lee, D., \*Guerra, M., **Macbeth, A.**, Higby, E., Atagi, N., & Kroll, J. F. Do early language experiences shape reading efficiency in young and older adulthood? (June 2019). Poster presented at the *Symposium on Cognition and Language Development (SoCAL)* at UCLA. Los Angeles, CA.

\*Agakhanyan, A., **Macbeth, A.**, & Chiarello, C. How the different contexts of language use among bilinguals relate to social network size. (May 2019). Poster presented at the *Inaugural R'Psyc Undergraduate Research Conference*. Riverside, CA.

\*Gupta, I., **Macbeth, A.**, & Chiarello, C. (May 2019). Studying compliance in participants wearing the EAR. Poster presented at the *Inaugural R'Psyc Undergraduate Research Conference*. Riverside, CA.

\*Sarabia, C., **Macbeth, A.**, & Chiarello, C. (May 2019). Does the number of bilingual parents one has affect language use and reading abilities in college students? Poster presented at the *Inaugural R'Psyc Undergraduate Research Conference*. Riverside, CA.

\*Silva, S., \*Leon, B., **Macbeth, A.**, & Chiarello, C. The impact of socioeconomic status on self-reported reading abilities in young adults. (May 2019). Poster presented at the *Inaugural R'Psyc Undergraduate Research Conference*. Riverside, CA.

\*Osita-Ogbonnaya, G., \*Finnegan, M., \*Rico, M., \*Dungore, F., Atagi, N., Rupp, M., **Macbeth, A.**, & Higby, E. Investigating the relationship between paracingulate sulcus patterns and executive functions. (May 2019). Poster presented at the *Inaugural R'Psyc Undergraduate Research Conference*. Riverside, CA.

- Macbeth, A.**, Atagi, N., Bruni, M., Mech, E. N., Sarkis, J. T., Karan, A., Robbins, M. L., & Chiarello, C. How bilingual language use relates to social network size and diversity. (November 2018). Poster presented at the *59<sup>th</sup> Annual Meeting of the Psychonomic Society*. New Orleans, LA.
- Chiarello, C., **Macbeth, A.**, Bruni, M., Atagi, N., Mech, E. N., Sarkis, J., Montag, J., Karan, A., & Robbins, M. Lend me your EAR: An experience sampling method to investigate natural speech. (November 2018). Spoken talk given at the *59<sup>th</sup> Annual Meeting of the Psychonomic Society*. New Orleans, LA.
- Bruni, M., **Macbeth, A.**, Atagi, N., Mech, E. N., Sarkis, J., Montag, J., Karan, A., Robbins, M., & Chiarello, C. Does self-report predict bilingual language use? (November 2018). Poster presented at the *59<sup>th</sup> Annual Meeting of the Psychonomic Society*. New Orleans, LA.
- Atagi, N., Mech, E. N., **Macbeth, A.**, Bruni, M., Sarkis, J., Montag, J., Karan, A., Robbins, M. L., & Chiarello, C. The effects of literary experiences on bilinguals' everyday speech. (November 2018). Poster presented at the *59<sup>th</sup> Annual Meeting of the Psychonomic Society*. New Orleans, LA.
- \*De La Cruz, B., **Macbeth, A.**, & Chiarello, C. Classifying code-switching behavior among bilinguals using the EAR. (August 2018). Poster presented at the *17<sup>th</sup> Annual MARC-U STAR Summer Symposium*. Riverside, CA.
- Macbeth, A.**, Bruni, M., Mech, E. N., Sarkis, J. T., Karan, A., Robbins, M. L., & Chiarello, C. Using the EAR to track bilingual language use. (August 2018). Poster presented at the *Society for the Neurobiology of Language 2018 Annual Meeting*. Quebec City, QC, Canada.
- \*Tahir, S., **Macbeth, A.**, & Chiarello, C. The effects of second language learning on cognitive control. (May 2018). Poster presented at the *11<sup>th</sup> Annual UC Riverside Undergraduate Research Symposium*. Riverside, CA.
- Macbeth, A.**, & Chiarello, C. Interhemispheric recognition decisions made more accurately, though not necessarily more quickly. (November 2017). Poster presented at the *58<sup>th</sup> Annual Meeting of the Psychonomic Society*. Vancouver, BC, Canada.
- Macbeth, A.**, Felton, A., & Chiarello, C. Evidence for right hemisphere role in semantic exemplar generation. (March 2017). Poster presented at the annual meeting of the *Cognitive Neuroscience Society*. San Francisco, CA.
- McDowell, A.** & Chiarello, C. Investigating nonverbal visual recognition memory: Evidence for a within hemisphere advantage. (November 2016). Poster presented at the *57<sup>th</sup> Annual Meeting of the Psychonomic Society*. Boston, MA.
- McDowell, A.** & Chiarello, C. Behavioral and structural correlates of the semantic system: A comparison of mixed and consistent handers. (November 2015). Poster presented at the *56<sup>th</sup> Annual Meeting of the Psychonomic Society*. Chicago, IL.

Vazquez, D., Ramos, A.I., Felton, A., Greene, M.R., **McDowell, A.**, Hernandez, A.E., & Chiarello, C. (May 2015). Structural indices of interhemispheric organization: Influence of bilingualism. Poster presented at the *Montreal Bilingual Brain Initiative Symposium*. Montreal, Quebec.

Chiarello, C., Ramos, A.I., Vazquez, D., Greene, M.R., Felton, A., **McDowell, A.**, Hernandez, A.E. (March 2015). Bilinguals demonstrate increased corpus callosum volume. Poster presented at the meeting of the *Cognitive Neuroscience Society*. San Francisco, CA.

**McDowell, A.**, Trammell, J., and Krumrei-Mancuso, E.J. (May 2014). How handedness direction and consistency relate to declarative memory task performance. Poster presented at the *26<sup>th</sup> Annual Meeting of the Association for Psychological Science*. San Francisco, CA.

Trammell, J.P., MacRae, P., Tseng, A., **McDowell, A.**, & Hunt, C.O. (May 2014). Steps walked are positively correlated with reasoning and memory in older adults. Poster presented at the *26<sup>th</sup> Annual Meeting of the Association for Psychological Science*. San Francisco, CA.

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## Teaching Experience

### Undergraduate (APU & UC Riverside):

- Introductory Psychology
- Data Analysis in Psychology
- Writing 2: Psychology Subdisciplines & Career Trajectories
- Cognition/Cognitive Processes
- Bilingualism, Biculturalism, & Cognition

### Teaching Assistant (UC Riverside):

- Introductory Psychology
- Introductory Statistics
- Research Methods
- Cognitive Processes
- Human Neuroimaging Lab
- Bilingual Minds and Brains

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## Guest Lectures

- 2018 “Bilingualism Across the Lifespan”  
(Bilingual Minds and Brains, UC Riverside)
- 2018 “Surface Based Analysis and Cortical Thickness”  
(Human Neuroimaging, UC Riverside)
- 2017 “Social Cognition & Consciousness”  
(Cognitive Processes, UC Riverside)

## **Advising & Mentorship**

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<u>Total number of students mentored to date:</u>	<b>44</b>
▪ Undergraduate students at APU	2
▪ Master's students at APU	1
▪ Undergraduate students at UC Riverside	41
▪ 93% members of underrepresented ethnic groups	
<u>Mentees who have matriculated into graduate programs to date:</u>	<b>8</b>
▪ Master's in Human Factors Psychology	1
▪ Master's in Global Medicine	1
▪ Master's in Mind, Brain, and Behavior	1
▪ Master's in Speech-Language Pathology	1
▪ Master's in Psychology	1
▪ Master's in Marriage and Family Therapy	1
▪ Medical School	2

## **Service Activities**

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### Professional:

#### *Ad Hoc Journal Reviewer:*

Journal of Experimental Psychology: Learning, Memory, and Cognition  
 Memory and Cognition  
 Applied Cognitive Psychology  
 Journal of Neurolinguistics (co-reviewer)

#### *Peer Reviewer:*

APSSC Student Grant Competition

### Departmental:

2019 *Graduate Student Representative*

“Assistant Professor of Teaching in Psychology” Search Committee, UC Riverside

2019 *Graduate Student Representative*

“Council on Undergraduate Research”, UC Riverside

## **Invited Talks & Outreach Activities**

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- 2020 Invited Speaker, “*Understanding the Bilingual Experience: Language Use and Inhibitory Abilities.*”  
 Talk given at La Sierra University Psychology/Neuroscience Colloquium.
- 2019 Invited Speaker, “*Dispelling Myths About Bilingualism.*”  
 Speech given at Riverside Toastmasters Club Open House.
- 2017 Organizer, “*Bilingualism Matters*” Conference at UC Riverside
- 2017 Inaugural Member, “*Bilingualism Matters*” Group at UC Riverside

## **Professional Organization Memberships**

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American Psychological Association  
Association for Psychological Science  
Cognitive Neuroscience Society  
The Psychonomic Society  
Society for the Neurobiology of Language  
Society for the Teaching of Psychology

## **Technical Training & Software Skills**

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Proficient in: SPSS, Matlab, SAS, E-Prime, Freesurfer, FSL, SPM  
Completed NIH-Funded Training Course in fMRI – University of Michigan (August 2017)