DANIEL R. MCCLOY

Postdoctoral Research Fellow   Laboratory for Auditory Brain Science & Neuroengineering

OVERVIEW

My research interests include auditory neuroscience, speech perception, acoustic phonetics, and phonetic and phonological typology. More specifically, I work on auditory attention in multitalker environments, individual differences in intelligibility, and distinctive feature theory.

CURRENT POSITION

Postdoctoral fellow, Laboratory for Auditory Brain Science & Neuroengineering (PI: Adrian KC Lee), part of the Institute for Learning & Brain Sciences at the University of Washington. I'm working on experiments that test the interaction between auditory attention and speech processing, by manipulating linguistic features of speech stimuli in auditory attention tasks. We're measuring listener accuracy, response time, and pupil dilation, with the goal of understanding the ways in which the same listening task can be more or less effortful for different listeners.

EDUCATION

- PhD in Linguistics (University of Washington, 2013): "Prosody, intelligibility and familiarity in speech perception" (PDF). Committee: Richard Wright (chair), Erick Gallun, Sharon Hargus, Gina-Anne Levow.

- MA in Linguistics (University of Washington, 2009): "The semantics of implicitly relational predicates" (PDF). Thesis advisor: Toshiyuki Ogihara.

- International Chinese Language Program (National Taiwan University, 2008).

- BA in Philosophy, *cum laude*, with distinction (University of Washington, 2002).

- BS in Neurobiology, *cum laude* (University of Washington, 2002).

PUBLICATIONS

A BibTeX file containing reference information for all listed publications is available here.

- MANUSCRIPTS & WORK-IN-PROGRESS

  ○ McCloy D., (in prep). Separating segmental and prosodic contributions to intelligibility

  ○ McCloy D., Lau B., Larson E., & Lee A. K. C., (in prep). Temporal alignment of pupillary response with stimulus events via deconvolution

  ○ McCloy D., Lau B., Larson E., & Lee A. K. C., (in prep). Pupil dilation indexes auditory spatial attention switching

- PEER-REVIEWED ARTICLES

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◦ McCloy D., & Lee A. K. C. (2015). Auditory attention strategy depends on target linguistic properties and spatial configuration. *The Journal of the Acoustical Society of America*, *138*(1), 97–114. DOI: 10.1121/1.4922328 (Published version | Pre-publication manuscript).

◦ McCloy D., Wright R., & Souza P. (2014). Talker versus dialect effects on speech intelligibility: A symmetrical study. *Language and Speech*. DOI: 10.1177/0023830914559234 (Pre-publication manuscript)

◦ Barrack C., McCloy D., & Wright R. (2014). Did murmur spread in Pre-Proto-Indo-European? *Indogermanische Forschungen: Zeitschrift für Indogermanistik und historische Sprachwissenschaft*, *119*(1), 149–158. DOI: 10.1515/if-2014-0009 (Pre-publication manuscript)

◦ Souza P., Gehani N., Wright R., & McCloy D. (2013). The advantage of knowing the talker. *Journal of the American Academy of Audiology*, *24*, 689–700. DOI: 10.3766/jaaa.24.8.6 (Pre-publication manuscript)

◦ Moran S., McCloy D., & Wright R. (2012). Revisiting population size vs. phoneme inventory size. *Language*, *88*(4), 877–893. DOI: 10.1353/lan.2012.0087 (Pre-publication manuscript | Data and R script)

• **TECHNICAL REPORTS**

◦ McCloy D. (2012). Vowel normalization and plotting with the phonR package. Technical Report 2012-01, UW Linguistic Phonetics Laboratory, Seattle, WA. (PDF)

• **CONFERENCE PROCEEDINGS & WORKING PAPERS**

◦ McCloy D., Wright R., & Souza P. (2014). Modeling intrinsic intelligibility variation: Vowel-space size and structure. *Proceedings of Meetings on Acoustics*, *18*, 060007. DOI: 10.1121/1.4870070 (PDF)

◦ McCloy D. (2014). Phonetic effects of morphological structure in Indonesian vowel reduction. *Proceedings of Meetings on Acoustics*, *12*, 060009. DOI: 10.1121/1.4870068 (PDF)

◦ McCloy D. (2013). Corpus-based productivity measures of English -er agentives and instrumentals. *UW Working Papers in Linguistics*, *31* (PDF)

◦ McCloy D. (2010). The semantics of implicitly relational predicates. In *Proceedings of the 26th Northwest Linguistics Conference (SFU Working Papers in Linguistics)* (PDF)

• **CONFERENCE PRESENTATIONS**

◦ McCloy D., Kishline L., & Lee A. K. C. (2014). Listener strategy and performance in linguistic and non-linguistic auditory divided attention tasks. Poster presented at the Gordon Research Conference on the Auditory System — Encoding Hearing: From Genes to Behavior, Lewiston, ME. (Poster)

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○ McCloy D., & Lee A. K. C. (2014). Effects of cognitive load on selective and divided auditory spatial attention. Poster presented at the 167th Meeting of the Acoustical Society of America, Providence, RI. (Poster)

○ Kishline L., McCloy D., Larson E., & Lee A. K. C. (2014). Can you divide attention across two streams or are you rapidly switching between them? Poster presented at the 37th Annual MidWinter Meeting of the Association for Research in Otolaryngology, San Diego, CA. (Poster)

○ McCloy D., & Lee A. K. C. (2013). Effects of auditory spatial attention in a semantic classification task. Poster presented at the 166th Meeting of the Acoustical Society of America, San Francisco, CA. (Poster)

○ McCloy D. (2013). Separating segmental and prosodic contributions to intelligibility. Poster presented at the 4th International Summer School on Speech Production and Perception: Speaker-Specific Behavior, Aix-en-Provence, FR. (Poster)

○ McCloy D., Moran S., & Wright R. (2013). Revisiting 'The role of features in phonological inventories'. Paper presented at the CUNY Conference on the Feature in Phonology and Phonetics, New York, NY. (Slides)

○ McCloy D., Wright R., & McGrath A. (2012). Modelling talker intelligibility variation in a dialect-controlled corpus. Poster presented at the 164th Meeting of the Acoustical Society of America, Kansas City, MO. (Poster)

○ Moran S., McCloy D., & Wright R. (2012). Revisiting the population vs phoneme-inventory correlation. Paper presented at the 86th Meeting of the Linguistic Society of America, Portland, OR. (Slides | Extended abstract)

○ McCloy D. (2011). Vowel laxing in Indonesian as a test case for interaction of morphological and syllabic structure. Poster presented at the 161st Meeting of the Acoustical Society of America, Seattle, WA. (Poster)

○ McCloy D. (2010). The semantics of implicitly relational predicates. Paper presented at the 26th Northwest Linguistics Conference, Burnaby, BC.

COURSES TAUGHT

• Introduction to Phonetics (LING 450): Instructor for five-week intensive summer course (2010, 2011).

• Introduction to Linguistics (LING 200): Teaching assistant for four sections (2008–2009).

• New Majors Seminar (PHIL 199): Developed and co-led a proseminar for incoming Philosophy students to introduce the breadth of the field and the research of UW faculty (2001, 2002).

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TUTORIALS & GUEST LECTURES

- "Statistical models for psychophysics: ANOVA vs. mixed models." *[LABS]^N* presentation (2014).

- "Advanced vowel plotting with phonR: Normalization, ellipses, polygons, and heatmaps." UW Phonetics Lab presentation (2012).

- "Introduction to R." Guest lecture in LING 553: Experimental Phonetics (2012).

- "Fitting and Plotting Linear Mixed Models in R." UW Phonetics Lab presentation (2011).

- "Design guidance for linguistics lecture slides." TA Training Workshop, UW Department of Linguistics (2011).

- "Troubleshooting SNR Problems in Laboratory Recordings." UW Phonetics Lab presentation (2011).

- "Teaching Linguistics with Moodle." TA Training Workshop, UW Department of Linguistics (2010).

- "Effective Team Teaching." TA Training Workshop, UW Department of Linguistics (2009).

- "Linguistics, Cognitive Science, and Philosophy of Mind." Guest lecture in PHIL 464: Philosophical Issues in the Cognitive Sciences (2009).

SOFTWARE & CORPORA

- Co-editor of PHOIBLE Online, a database of over 1600 phonological inventories.

- Co-developer of the PN/NC Corpus, a 2-dialect, 20-talker corpus of 200 parallel sentences of English.

- Co-developer of the python library "expyfun: Experimental paradigm functions" doi:10.5281/zenodo.11640.

- Developer of the R package "phonR: Tools for Phoneticians and Phonologists." doi:10.5281/zenodo.15878.

- Developer of the Praat script library "Praat Semi-Auto," a set of scripts designed to streamline manual acoustic measurements for cases where forced alignment and automatic measurement are not precise enough.

ACADEMIC EMPLOYMENT

- Postdoctoral Research Fellow, UW Laboratory for Auditory Brain Science & Neuroengineering (2013–present).

- Research Associate, UW Linguistic Phonetics Laboratory (2010–2013).

- Teaching Associate for Digital Curriculum Development, Department of Linguistics (2009–2010).

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- Organizer, Cyberling 2009 (NSF-funded workshop at LSA summer institute, UC Berkeley).
- Linguistics Tutor, UW Center for Learning and Undergraduate Enrichment (2009).
- Teaching Assistant, Department of Linguistics (2008–2009).
- Tutor, Philosophy Writing Center (2001–2002).

ACADEMIC SERVICE

- **MENTORSHIP**
  - Mentor, graduate student L. Kishline, UW Dept. of Speech & Hearing Sciences (2014–present).
  - Member, Doctor of Audiology capstone commitee for N. Gehani, Northwestern University Department of Communication Sciences & Disorders (2011–2012).
  - Mentor, graduate student J. Crowgey, UW Department of Linguistics (2009–2013).
  - Mentor, undergraduate student A. McGrath, UW Department of Linguistics (2011–2012).

- **CONFERENCES & REVIEWS**
  - Reviewer for LSA Annual meeting (2015).
  - *Ad hoc* reviewer for *Phonology* (2012, 2013).
  - *Ad hoc* reviewer for *UW Working Papers in Linguistics* (2007, 2012).
  - Reviewer for Northwest Linguistics Conference (2008, 2012).
  - Co-chair, 24th Northwest Linguistics Conference (2008).

- **COMMITTEES**
  - Member, LSA Committee on Scholarly Communication in Linguistics (2014–present).
  - Member, LSA Technology Advisory Committee (2013–2014).
  - President, Society of Undergraduate Philosophers, UW Philosophy Department (2000–2002).
  - Member, Undergraduate Affairs & Curriculum Committees, UW Philosophy Department (2001–2002).

- **OTHER**
  - Workshop participant, Probabilistic Transcription team, JSALT 2015.
  - Discussion leader, UW Biomedical Research Integrity series (2013).
  - Webmaster, Cyberling Blog (2010–2013).
  - Webmaster, UW Linguistics Society (2010–2012).

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LANGUAGES

- Natural: English (native), Modern Standard Chinese (intermediate), Spanish (limited reading knowledge).

- Computational (in decreasing order of facility): R, Python, Praat, LaTeX, Bash, HTML, CSS, CSL, MATLAB, Actionscript 3 (Flash), BST.

AWARDS AND FELLOWSHIPS

- NIH LRP award (2014).

- Postdoctoral fellowship (NIH T32), UW Department of Speech and Hearing Sciences (2013–2014).

- "Research Excellence Award," UW Department of Linguistics (2013).

- Foreign Language and Area Studies (FLAS) fellowship for study of Modern Standard Chinese, U.S. Department of Education (2007–2008).

- "Outstanding Graduating Senior," UW Department of Philosophy (2002).

- "Outstanding Undergraduate Scholar," UW Department of Philosophy (2001).

- *Phi Beta Kappa* scholarship (2000).

PROFESSIONAL AND SCHOLARLY AFFILIATIONS

- Member, Association for Research in Otolaryngology (2014–present).

- Member, International Phonetic Association (2014–present).

- Member, Acoustical Society of America (2011–present).

- Member, Linguistic Society of America (2009–present).

- Member, *Phi Beta Kappa* (2002–present).

OTHER RELEVANT SKILLS

- Solid grasp of scientific method, experimental design, statistical analysis, and model interpretation.

- Knowledge of and contribution to open-source tools for scientific research.

- More than ten years' experience as a graphic designer & web developer. Strong skills in data visualization, color correction, and information structure and flow. Professional-level software skills in Adobe Creative Suite.

- Comfortable in Linux, Windows, and OS X environments.

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