Stephen C. Van Hedger  
Curriculum Vitae

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| University of Western Ontario | svanhedg@uwo.ca |
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**EDUCATION & PROFESSIONAL EXPERIENCE**

**Postdoctoral Associate, University of Western Ontario** 2018-present

Brain and Mind Institute  
 Advisor: Ingrid Johnsrude

**Postdoctoral Scholar, University of Chicago** 2015-2018

Chicago Center for Practical Wisdom

Advisors: Howard Nusbaum, Marc Berman,

**Ph.D., Psychology, University of Chicago** 2015

Advisor: Howard Nusbaum

**A.M., Social Sciences, University of Chicago** 2012

Advisor: Howard Nusbaum

**A.B., Music, University of Chicago** 2009

General and Departmental Honors  
Phi Beta Kappa Honor Society

**FELLOWSHIPS, GRANTS, AND AWARDS**

**Western Cognitive Neuroscience Postdoctoral Fund ($50,000)** 2018-2020  
University of Western Ontario Brain and Mind Institute

**John Dewey Prize Lectureship**  2015

University of Chicago Department of Psychology

**Division of Social Sciences Research Grant ($11,795)** 2014-2015University of Chicago

**Starkey Duncan Award for Excellence in Undergraduate Teaching** 2014

University of Chicago Department of Psychology

**Norman H. Anderson Research Fellow** **($2580)** 2011-2015  
University of Chicago Department of Psychology

**Arts|Science Graduate Collaboration Grant ($1,500)** 2010-2011  
University of Chicago

**Fulbright Program Finalist** 2009, 2010

United States Department of State

**PUBLICATIONS**

**Van Hedger, S.C.**, Heald, S.L.M., Uddin, S., & Nusbaum, H.C. (2018). A note by any other name: Intonation context rapidly influences absolute note judgments. *Journal of Experimental Psychology: Human Perception & Performance*

**Van Hedger, S.C.**, & Nusbaum, H.C. (2018). Absolute pitch. In: J. Vonk, T. K. Shackelford (eds.),

*Encyclopedia of Animal Cognition and Behavior*. Springer, Cham.

Uddin, S., Heald, S.L.M., **Van Hedger, S.C.**, & Nusbaum, H.C. (2018). Hearing sounds as words: Neural responses to environmental sounds in the context of fluent speech. *Brain & Language, 179,* 51-61.

Nusbaum, H.C., Uddin, S., **Van Hedger, S.C.**, & Heald, S.L.M. (2018). Consolidating skill learning through sleep. *Current Opinion in Behavioral Sciences, 20,* 174-182.

Uddin, S., Heald, S.L.M., **Van Hedger, S.C.**, Klos, S., & Nusbaum, H.C. (2018). Understanding environmental sounds in sentence context. *Cognition, 172,* 134-143.

**Van Hedger, S.C.**, Heald, S.L.M., & Nusbaum, H.C. (2018). Long-term pitch memory for music recordings is related to auditory working memory precision. *The Quarterly Journal of Experimental Psychology*, *71,* 879-891.

**Van Hedger, S.C.**, Heald, S.L.M., Huang, A., Rutstein, B., & Nusbaum, H.C. (2017). Telling in-tune from out-of-tune: Widespread evidence for implicit absolute intonation. *Psychonomic Bulletin & Review, 24,* 481-488.

Heald, S.L.M., **Van Hedger, S.C.**, & Nusbaum, H.C. (2017). Understanding sound: Auditory skill acquisition. *Psychology of Learning and Motivation, 67,* 53-93.

Heald, S.L.M.\*, **Van Hedger, S.C.\***, & Nusbaum, H.C. (2017). Perceptual plasticity for auditory object recognition. *Frontiers in Psychology,* 10.3389/fpsyg.2017.00781

**Van Hedger, S.C.**, Heald, S.L.M., & Nusbaum, H.C. (2016). What the [bleep]? Enhanced absolute pitch memory for a 1000 Hz sine tone. *Cognition*, *154,* 139-150.

**Van Hedger, S.C.,** Heald, S.L.M., & Nusbaum, H.C. (2015). The effects of acoustic variability on absolute pitch categorization: Evidence of contextual tuning. *Journal of the Acoustical Society of America*, *138,* 436-446.

**Van Hedger, S.C.,** Heald, S.L.M., Koch, R., & Nusbaum, H.C. (2015). Auditory working memory predicts individual differences in absolute pitch learning. *Cognition*, *140,* 95-110.

**Van Hedger, S.C.,** Palmer, C., Hogstrom, A., & Nusbaum, H.C. (2015). Sleep consolidation of musical competence. *Music Perception: An Interdisciplinary Journal*, *33*, 163-178.

Heald, S.L.M., **Van Hedger, S.C.**, & Nusbaum, H.C. (2014). Auditory category knowledge in experts and novices. *Frontiers in Neuroscience,* 8*:*260. 10.3389/fnins.2014.00260

**Hedger, S.C**., Nusbaum, H.C., Lescop, O., Wallisch, P., & Hoeckner, B. (2013). Music can elicit a visual motion aftereffect. *Attention, Perception, & Psychophysics, 75,* 1039-1047.

**Hedger, S.C**., Heald, S.L.M., & Nusbaum, H.C. (2013). Absolute pitch may not be so absolute. *Psychological Science, 24,* 1496-1502.

**Hedger, S. C**., Nusbaum, H.C., & Hoeckner, B. (2013). Conveying movement in music and prosody. *PLOS One*, 10.1371/journal.pone.0076744

\* Co-First Authors

**MANUSCRIPTS UNDER REVIEW**

**Van Hedger, S.C.**, Heald, S.L.M., & Nusbaum, H.C. Absolute pitch can be learned by some adults.

bioRxiv 325050; https://doi.org/10.1101/325050

**Van Hedger, S.C.**, & Nusbaum, H.C. Individual differences in absolute pitch performance: Contributions of working memory, musical expertise, and tonal language background. PsyArXiv; https://doi.org/10.31234/osf.io/vfqe6

**Van Hedger, S.C.**, Huang, A., Nusbaum, H.C., Kotabe, H., & Berman, M.G. The aesthetic preference for nature sounds depends on sound object recognition.

**Van Hedger, S.C.**, Nusbaum, H.C., Clohisy, L., Jaeggi, S.M., Buschkuehl, M., & Berman, M.G. Of cricket chirps and car horns: The effect of nature sounds on cognitive performance. PsyArXiv; https://doi.org/10.31234/osf.io/f5hcz

Stenfors, C., **Van Hedger, S. C.**, Schertz, K. E., Meyer, F. C., Smith, K., Norman, G., … Berman, M. Cognitive Restoration from Nature Across Multiple Exposure Types - A Meta-Analysis Delineating the Effects of Test Order and Affect. PsyArXiv; https://doi.org/10.31234/osf.io/w6n2f

Heald, S.L.M., Uddin, S., **Van Hedger, S.C.**, Snyder, J., & Nusbaum, H.C. Rapid generalized perceptual learning affects early sensory changes in neural processing.

Uddin, S., Reis, K., **Van Hedger, S.C.**, Heald, S.L.M., & Nusbaum, H.C. Cortical mechanisms of talker normalization in fluent sentences.

Zhen, A., **Van Hedger, S.C.**, Heald, S.L.M., Goldin-Meadow, S., & Tian, X. Manual Directional Gestures Facilitate Cross-Modal Perceptual Learning

**TEACHING EXPERIENCE**

My goal is to turn the classroom into a space where students can engage in guided, *active* problem solving. This approach allows students to develop scientific curiosity toward the course topics, which promotes retention and expansion of taught material. I frequently design and implement short, illustrative experiments so students can experience class concepts as both participants and researchers. These approaches to creating an active learning environment are flexible enough to be realized in both intimate seminars and large lecture-style courses.

**PSYC 24860 – The Musical Mind**

*Instructor*

Self-designed course (scope, aims, reading list, lectures, and assignments)

Prepared and gave nine lectures on a variety of topics (e.g., absolute pitch, musical syntax)

Led weekly discussion of recent and classic empirical papers in music cognition

**SOSC 14100, 14200 – Mind I, II**

*Lecturer*

Led a weekly discussion section of 19 students

Delivered a lecture to approximately 100 undergraduates and 10 faculty

Responsible for all grading and assignment of final course grades for discussion section

**SOSC 14100, 14200, 14300 – Mind I, II, III**

*Teaching Intern*

Evaluated weekly response papers

Arranged individual meeting with students to discuss ideas from the course

**PSYC 20700 – Sensation and Perception**

*Teaching Assistant*

Led weekly discussion sections of approximately 20 students

Delivered a lecture on Music Perception to approximately 60 undergraduates

Organized an out-of-class midterm study session (attended by 30 students)

**PSYC 20200 – Psychological Research Methods**

*Teaching Assistant*

Led a weekly discussion section of 20 students

Delivered a lecture on Experimental Designs to approximately 75 undergraduates

Helped students design and conduct two out-of-class research projects

**MENTORSHIP EXPERIENCE**

**Research Mentor** 2010 - 2018*The University of Chicago*

Guided 20+ undergraduate students through conducting psychological research

**Practicum Advisor, Master’s Program in Computer Science (MPCS)** 2016

*The University of Chicago*

Worked closely with two masters students in the design and execution of psychophysical projects

Evaluated students’ progress several times throughout the span of the projects

**Research Mentor, Psychology Honors Thesis** 2013 - 2018*The University of Chicago*

Luke Clohisy (2017-2018), currently a fourth-year undergraduate at the University of Chicago (Project Title: *Rapid shifts in attention to pitch and tempo can influence long-term memory for popular recordings*)

Max Bluestone (2015- 2016), currently Lab Manager of Dr. Maureen Ritchey’s Memory Modulation Lab at Boston College (Project Title: *The effects of semantic and temporal congruency on memory for audiovisual clips*)

Anders Hogstrom (2012-2013), currently a Ph.D. Student in Clinical Psychology at the University of Connecticut (Project Title: *The sound of silence: Attention entrainment to isochronous and syncopated beats*)

**Research Consultant, Advanced Graduate Course** 2009-2010

*The University of Chicago*

Served as primary research consultant for an advanced graduate course in multimedia perception

Assisted graduate students in the design, execution, and data analysis of independent research

**PEER-REVIEW ACTIVITIES**

**Ad-Hoc reviewer for:**

PNAS| Cognitive Science | eLife | Brain and Language | Social Cognitive and Affective Neuroscience | PLOS One | Acta Psychologica | Journal of Experimental Psychology: Learning, Memory, and Cognition | The Journal of the Acoustical Society of America | 15th International Conference on Music Perception and Cognition

**PROFESSIONAL ORGANIZATIONS**

The Society for Music Perception and Cognition | The Psychonomic Society | Society for the Neurobiology of Language | The Association for Psychological Science | The Acoustical Society of America | The American Psychological Association

**ACADEMIC SERVICE**

**Fulbright Scholarship Interviewer** 2012 – 2018

*The College, University of Chicago*

Annually review between 4-7 applications for Fulbright Scholarships

Interview applicants and submit recommendations to the university

**PRISM Graduate Student Preceptor** 2012 - 2014

*Department of Psychology, University of Chicago*

Designed events to help undergraduate students find research opportunities on campus, summer internships, and employment after graduation

**Workshop Coordinator (Topic: Perception and Understanding of Music)** 2011 - 2012  
*Council on Advanced Studies, University of Chicago*

Organized biweekly presentations of original research given by graduate students and faculty

Managed a budget of $1500 for organizing outside speaker visits

**Travel and Research Committee Member** 2010 - 2014  
*Psychology Graduate Student Organization, University of Chicago*

Reviewed applications for travel and research related expenses among graduate students

Allocated funds based on merit and availability

**SELECTED CONFERENCE PRESENTATIONS**

* Zhen, A., **Van Hedger, S.C.**, Heald, S.L.M., Goldin-Meadow, S., & Tian, X. (2017, November). Manual directional gestures facilitate learning of Mandarin tones. Society for the Neurobiology of Language Conference, Baltimore, MD.
* Heald, S.L.M., Uddin, S., **Van Hedger, S.C.**, Snyder, J., & Nusbaum, H.C. (2017, November). Early sensory changes in neural processing gate generalized perceptual learning. Society for the Neurobiology of Language Conference, Baltimore, MD.
* **Van Hedger, S.C.**, Heald, S.L.M., Huang, A., Rutstein, B., & Nusbaum, H.C. (2016, November). Telling in-tune from out-of-tune: Widespread evidence for implicit absolute intonation. Annual Meeting of the Psychonomic Society, Boston, MA.
* Heald, S.L.M., **Van Hedger, S.C.**, & Nusbaum, H.C. (2016, November). Working memory predicts individual differences in learning synthetic speech produced by rule. Annual Meeting of the Psychonomic Society, Boston, MA.
* Uddin, S., Heald, S.L.M., **Van Hedger, S.C.**, & Nusbaum, H.C. (2016, November). Recognizing sounds in sentence context. Annual Meeting of the Psychonomic Society, Boston, MA.
* **Van Hedger, S.C.**, Heald, S.L., Wu, S., & Nusbaum, H.C. (2015, November). Judging the absolute pitch of novel recordings of familiar songs. Annual Meeting of the Psychonomic Society, Chicago, IL.
* **Van Hedger, S.C.**, Heald, S.L., Nusbaum, H.C. (2015, November). *The effects of acoustic variability on absolute pitch categorization: Evidence for contextual tuning.* Acoustical Society of America 170th Meeting. Jacksonville, FL.
* Heald, S.L., **Van Hedger, S.C.**, Nusbaum, H.C. (2015, November). *Incidental absolute pitch learning in an interactive, multi-modal environment.* Acoustical Society of America 170th Meeting. Jacksonville, FL.
* **Van Hedger, S.C.,** Heald, S.L., Koch, R., Nusbaum, H.C. (2015, August). *Auditory working memory predicts individual differences in absolute pitch learning: Evidence from short- and long-term training.* Society for Music Perception and Cognition Conference. Vanderbilt University, Nashville, TN.
* **Van Hedger, S.C.**, Heald, S.L., Koch, R., Nusbaum, H.C. (2014, October). *Absolute memory for popular songs is predicted by auditory working memory ability*. Acoustical Society of America 168th Meeting. Indianapolis, IN.
* Hogstrom, A., **Hedger, S.C.**, Nusbaum, H.C. (2013, August). *The sound of silence: Attention entrainment to isochronous and syncopated beats*. Society for Music Perception and Cognition Conference. Ryerson University, Toronto, ON.
* **Hedger, S.C.**, Heald, S.L., Nusbaum, H.C. (2013, August). *Absolute pitch may not be so absolute*. Society for Music Perception and Cognition Conference. Ryerson University, Toronto, ON.
* **Hedger, S.C.,** Klos, S., Nusbaum, H.C. (2013, May). *Individual differences in the short- and long-term training of musical pitch*. Midwest Music Cognition Symposium. The Ohio State University, Columbus, OH.
* Heald, S.L., **Hedger, S.C.**, Klos, S., Colson, B., Nusbaum, H.C. (2013, January) *Spoken gesture is integrated with sentence meaning during speech comprehension*. Auditory Cognitive Neuroscience Society Meeting, Tucson, AZ.
* **Hedger, S.C.,** Nusbaum, H.C., Lescop, O., Wallisch, P., Hoeckner, B. (2013, January). *Music can elicit a visual motion aftereffect: Evidence from behavior and fMRI*. Auditory Cognitive Neuroscience Society Meeting, Tucson, AZ.
* **Hedger, S.C.,** Heald, S.L., Nusbaum, H.C. (2012, November). *Absolute pitch may not be so absolute.* Annual Meeting of the Psychonomic Society, Minneapolis, MN.
* **Hedger, S.C.,** Nusbaum, H.C., Lescop, O., Wallisch, P., Hoeckner, B. (2012, May). *Music can elicit a visual motion aftereffect*. Association for Psychological Science Convention, Chicago, IL.
* **Hedger, S.C.,** Palmer, C., Hogstrom, A., Nusbaum, H.C. (2012, May). *The effects of sleep-dependent consolidation on motoric and abstract learning in music.* Midwest Cognitive Science Meeting. Indiana University, Bloomington, IN.
* **Hedger, S.C**., Hoeckner, B., Nusbaum, H.C. (2011, August). *Music Can Convey Movement like Prosody in Speech*. Society for Music Perception and Cognition Conference. Eastman School of Music, Rochester, NY.
* **Hedger, S.C.,** Heald, S.L., DeSouza, J., Hoeckner, B., Nusbaum, H.C. (2011, May). *The Role of Vibrotactile Input in Musical Performance.* Franke Institute for the Humanities*.* The University of Chicago*,* Chicago, IL.
* **Hedger, S.C**., Hoeckner, B., Nusbaum, H.C. (2011, April). *The Sound of Motion in Music*. Midwest Cognitive Science Meeting. Michigan State University, East Lansing, MI.
* Heald, S.L., **Hedger, S.C.,** Lescop, O., Hoeckner, B., Nusbaum, H.C. (2010, November). *Localized Context Influences the Perceptual Judgment of Musical Tones*. Annual Meeting of the Psychonomic Society, St. Louis, MO.

**INVITED TALKS**

* **Van Hedger, S.C.** (2016, June). *Pitch memory in adulthood: Individual differences, generalizations, and abstractions.* Invited talk: Musical Learning across the Lifespan Workshop. University of Western Ontario. London, ON.
* **Van Hedger, S.C.** (2015, December). *Telling sharp from flat: Pitch memory in the general population.* Invited talk at DePauw University. Greencastle, IN.
* **Van Hedger, S.C.** (2015, July). *Developing a framework for musical understanding.* Invited talk, Summer Undergraduate Research Group. The University of Chicago, Chicago, IL.
* **Van Hedger, S.C.** (2014, March). *Does this Taylor Swift sound sharp? Exploring pitch memory in the general population.* Invited talk at Elmhurst College. Elmhurst, IL

**REFERENCES**

Dr. Howard Nusbaum h-nusbaum@uchicago.edu  
Dr. Marc Berman bermanm@uchicago.edu

Dr. Berthold Hoeckner bhoeckne@uchicago.edu

Dr. Anne Henly ashenly@uchicago.edu