

# David John Baker

March 26, 2020

## Contact Information

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## Online Platforms

👤 ResearchGate

🔗 Github

🌐 My Website

🏠 OSF

## EDUCATION

Ph.D, Music Theory May, 2019

Cognitive and Brain Sciences Minor

Louisiana State University, Baton Rouge, Louisiana, USA

Dissertation – Modeling Melodic Dictation

Honorable Mention, Distinguished Dissertation Award

MSc., Music, Mind and Brain September, 2014

Goldsmiths, University of London, England

Thesis – Salience and Memorability of Leitmotives in the Music of Richard Wagner

B.M., Instrumental Performance May, 2012

Baldwin Wallace University, Conservatory of Music, Berea, OH, USA

## PUBLICATIONS

### Journal Articles

Vuvan, D. T., Simon, E., **Baker, D. J.**, Monzingo, E., Elliott, E. M. (2020). Musical Training Mediates the Relation Between Working Memory Capacity and Preference for Musical Complexity. *Memory and Cognition*. <https://doi.org/10.31234/osf.io/9fe8n>

**Baker, D.**, Ventura, J., Calamia, M., Shanahan, D., Elliott, E. (2018). Examining Musical Sophistication: A replication and theoretical commentary on the Goldsmiths Musical Sophistication Index. *Musicae Scientiae*. <https://doi.org/10.1177/1029864918811879>

Akkermans, J., Schapiro, R., Müllensiefen, D., Jakubowski, K., Shanahan, D., **Baker, D.**, Busch, V., Lothwesen, K., Elvers, K., Fischinger, T., Schlemmer, K. & Frieler, K. (2018) Decoding emotions in expressive music performances: A multi-lab replication and extension study. *Cognition and Emotion*, 33(6). doi:10.1080/02699931.2018.1541312

**Baker, D.** and Müllensiefen D. (2017). Perception of Leitmotives in Richard Wagner's *Der Ring des Nibelungen*. *Frontiers in Psychology: Cognition, Special Issue on Bridging Music Informatics with Music Cognition*. [Article]

### Book Chapters

**Baker, D.** (forthcoming 2020). Understanding Melodic Dictation via Experimental Methods In P. Fleet K. Cleland (Eds.), *Routledge Companion to Aural Training in Music Education* (pp. xxx-xxx). Milton Park, Abingdon, Oxon: Routledge.

**Baker, D.** and Shanahan, D. (2018). Examining Fixed and Relative Measurements of Similarity through

Jazz Melodies. In *Scholarly Approaches to Mathematical Music Theory: Algebra and Combinatorics, Geometry, Topology, and Graph Theory, Discrete Fourier Transform and Distance Measures for Music*.

Müllensiefen, D., **Baker, D.**, Rhodes, C., Crawford, T., Dreyfus, L. (2016). Recognition of leitmotives in Richard Wagner's music: chroma distance and listener expertise. In Springer (Ed.) *Analysis of Large and Complex Data*.

## Conference Proceedings

**Baker, D.**, Elliott, E., Shanahan, D., Ventura, J., Monzingo, E., Ritter, B., & Young, C. (2018) Explaining Objective and Subjective Aspects of Musical Sophistication: Insights from General Fluid Intelligence and Working Memory. *Proceedings of 2018 International Conference on Music Perception and Cognition*. [Conference Proceedings Paper]

Shanahan, D., Elliott, E., **Baker, D.**, Ventura, J., Monzingo, E., Holt, H., & Keller, H. (2018) Dissecting the Effects of Working Memory, General Fluid Intelligence, and Socio-Economic Status on Musical Sophistication. *Proceedings of 2018 International Conference on Music Perception and Cognition*. [Conference Proceedings Paper]

**Baker, D.**, Monzingo, E., & Shanahan, D. (2018) Modeling Aural Skills Dictation. *Proceedings of 2018 International Conference on Music Perception and Cognition*. [Conference Proceedings Paper]

Monzingo, E., **Baker, D.**, & Shanahan, D. (2018) The Relationships Between Genre Preference, Aural Skills, and Tonal Working Memory. *Proceedings of 2018 International Conference on Music Perception and Cognition*. [Conference Proceedings Paper]

Monzingo, E., Shanahan, D., Marasco, A., Elliott, E., **Baker, D.**, Davis, D., & Albrecht, J. The Effects of Melodic Contagions in the Oral Transmission of Melodies. *Proceedings of 2018 International Conference on Music Perception and Cognition*. [Conference Proceedings Paper]

**Baker, D.**, Trahan, T., Müllensiefen, D. (2016) Measuring Music To Brand Personality: A Semantic Differential Tool for Measuring Emotional Space. *Proceedings of 2016 International Conference on Music Perception and Cognition*. [Conference Proceedings Paper]

**Baker, D.**, Rosado, A., Shanahan, E., Shanahan, D. (2016) The Interaction of Schema-Driven Gestures and Instrumental Affordances in Bebop Improvisations. *Proceedings of 2016 International Conference on Music Perception and Cognition*. [Conference Proceedings Paper]

Blust, A., **Baker, D.**, Richard, K., Shanahan, D. (2016) Music, Animacy, and Rubato: What makes music sound human? *Proceedings of 2016 International Conference on Music Perception and Cognition*. [Conference Proceedings Paper]

Berhdal, E., Blandino, M., **Baker, D.**, Shanahan, D. (2016). An Approach for Using Information Theory to Investigate Continuous Control of Analog Sensors by Humans. *Audio Mostly*. Norrköping, Sweden. [Conference Proceedings Paper]

**Baker, D.**, Rindfleisch, C., Müllensiefen, D. (2015) Parsifal and the effect of narrative on unconscious arousal. *Proceedings of 2015 European Society of Cognitive Sciences of Music*. [Conference Proceedings Paper]

Müllensiefen, **Baker, D.**, D., Lewis, R., Rhodes, C., Fields, B., and Crawford, T. (2014) Multi-modal Musical Performance Capture. In: *Digital Music Research Network (DRM+9)*. London, United Kingdom. [Conference/Workshop Item]

## Reviews

**Baker, D.**, (2018) "Coughing and Clapping", in *Empirical Musicology Review* , Vol 13, No. (3-4), pp. 164-165. [Book Review]

**Baker, D.**, (2015) "Unlocking the Mysteries of Your Brain, Dr. Daniel Levitin Public Lecture", in *Psychomusicology: Music, Mind, and Brain*, Vol 25, No.4, pp. 455-456. [Public Lecture Review]

## Manuscripts in Submission

**Baker, D.** (March, 2020). The *MeloSol* Corpus. *Submitted*

**Baker, D.** (October 2019). Frequently Occurring Musical Patterns are Easier to Recall. *Submitted*. [Preprint via OSF]

Elliott, E., Ventura, J., **Baker, D.**, Shanahan, D. (July, 2019). The Prediction of Working Memory Capacity by Music Training and Aptitudes: The Importance of Non-Verbal Intelligence and Tonal Stimuli. *Submitted*.

## Manuscripts in Preparation

**Baker, D.** Elliott, E. (October 2019). Working Memory Capacity Best Explains Performance on Musical Memory Task. *In Preparation* [Preprint via OSF]

Ma, Y., Elliott, E., **Baker, D.**, Davis, C., Vukovics, K. Lyrics and Emotion in Songs: A Conceptual Replication Study of Ali and Peynircioglu, 2006. *In Preparation*

Vukovics, K., Elliott E., Ma, Y., **Baker, D.** Does Musical Training Protect Against Auditory Distractions? *In Preparation*

## Other Publications

Müllensiefen, D., **Baker, D.** (2015) Music in Advertising: Testing What Works (2015) Audio Branding Academy Yearbook 2015.[Article in Yearbook]

## INVITED TALKS

### Academic Talks

**Baker, D.** (November, 2018) Modeling Melodic Dictation. Research Seminar: Computing & Communications Department, The Open University. Milton Keynes, England.

**Baker, D.** (November, 2018) Modeling Melodic Dictation. C4DM Lab at Queen Mary, University of London. London, England.

### Guest Lectures

**Baker, D.** (February, 2020) Memory for Melodies. Music Cognition, Quinnipiac University. New Haven, Connecticut. *Skype Lecture*

**Baker, D.** (March, 2019) Music Cognition and Music Theory. Analytic Techniques in Music Theory, Louisiana State University. Baton Rouge, Louisiana. *Skype Lecture*

### Data Science Lectures

**Baker, D.** (March, 2020) The Science of Netflix: How Recommendation Systems Work. Online Meet-Up. London, England. *Zoom Lecture* [Link to Talk Here](#)

**Baker, D.** (2019) haRnessing The Open Source Community to Help Local Communities. EARL London Conference. September 10–12th [10 Minute #data4good Flash Talk]

## TEACHING EXPERIENCE

### Lead Data Science Instructor — Flatiron School, WeWork

September, 2019 – Present

London, England

- Led cohorts of approximately twenty students, teaching fundamentals of data science throughout 15 week intensive boot camp
- To date have placed 6 students in full-time data science roles
- Lectured, assessed, and critiqued students daily on Python programming (pandas, seaborn, statsmodels, sci-kit learn), data engineering (SQL), and statistics and experimental design (NHST)
- Lectured on more advanced topics (Clustering, PCA, NLP, Intro to Deep Learning, R + tidyverse for Python programmers)
- Taught enterprise training courses to corporate clients looking to up-skill current employees via week-long workshops
- Performed duties required as senior managerial role (hiring, administration)

### R Instructor and Course Designer, Contracted

Minerva Statistical Consulting, London, England

Spring – Summer, 2019

- Created and taught two day weekend courses and workshops on topics related the R programming language
- Courses focused on practical, hands on learning in small group settings
- Overall positive feedback can be found here

### Graduate Multivariate Statistics, Teaching Assistant

LSU Psychology Department, Baton Rouge, Louisiana

Spring, 2018

- Assisted in grading of homework assignments, creation of tests for graduate level multivariate statistics class
- Topics in course included Data Cleaning, Multiple Regression, MANOVA, MANCOVA, Principal Components Analysis/Factor Analysis, Logistic Regression

### Intermediate Statistics, Teaching Assistant

LSU Psychology Department, Baton Rouge, Louisiana

Autumn, 2017

- Created and graded assignments for course required of all LSU Psychology Graduate students
- Creating supplemental material for course so students can do homework assignments in R in addition to SPSS; free and open to public [PROJECT]
- Lectured course material when instructor was not able [VIDEO]

### Foundations of Music Study, Instructor of Record

LSU Music Department, Baton Rouge, Louisiana

Autumn, 2016

- Taught remedial music theory and aural training course three times a week to undergraduates
- Responsible for all course material ranging from lectures, to homework assignments, bi-weekly recitations, to play-and-sing piano preparations, and teaching of aural-skills, held office hours.
- Homework assigned via Oxford Music Theory Skill Builder

### Aural Skills IV, Instructor of Record

LSU Music Department, Baton Rouge, Louisiana

Semesters Taught

Spring 2015, Spring 2016

- Taught Aural Skills Labs to second-year undergraduate students, classes focused on providing individual attention to learning how to sight-sing chromatic and atonal melodies as well as complex rhythms.
- Responsible for grading bi-weekly individual recitations with materials ranging from prepared melodies, to play-and-sing piano preparations, to sight-singing
- Aided Instructor of Record for large Music Theory lecture

### Aural Skills III, Instructor of Record

LSU Music Department, Baton Rouge, Louisiana

Semesters Taught

Autumn 2015, Autumn 2016

- Taught Aural Skills Labs to second-year undergraduate students, classes focused on providing individual attention to learning how to sight-sing melodies and rhythms.
- Responsible for grading bi-weekly individual recitations with materials ranging from prepared melodies, to play-and-sing piano preparations, to sight-singing
- Aided Instructor of Record for large Music Theory lecture

## SERVICE TO PROFESSION

### SMPC Executive Board, Student Member

2019

Society for Music Perception and Cognition

- Organized student oriented events at national conference including Faculty-Student lunch, Applying to Graduate School Panel, Early Career Session Panel, and Student Meet-and-Greet
- Duties to assist and advise the President, Secretary, Treasurer, and President Elect in their deliberations and their duties, and in general shall see to the welfare of SMPC
- Represents the views of student members of SMPC

### Peer Reviewer

2018 – 2019

Journals and Organization

- Music Perception
- Music and Science
- Musicae Scientiae
- Psychology of Music
- SysMus Conference Series

### LSU Summer Institute on the Future of Graduate Studies

May, 2018

Baton Rouge, Louisiana

- Served as on advisory committee/think tank with both students and faculty for LSU Graduate School
- Met daily for 3 weeks to discuss LSU's commitment to AltAc and Career Diversity
- Created draft of mentoring document proposed to be used across campus

### Student Representative for Search for Dean

Spring, 2012

Berea, Ohio

- Served on committee to select Dean for Baldwin Wallace Conservatory of Music
- Organized and led all Student–Candidate symposia

## PROFESSIONAL EXPERIENCE

### Lead Data Science Instructor — Flatiron School, WeWork

September, 2019

London, England

- Led cohorts of approximately twenty students, teaching fundamentals of data science throughout 15 week intensive boot camp
- To date have placed 2 students in full-time data science roles
- Lectured, assessed, and critiqued students daily on Python programming (pandas, seaborn, statsmodels, sci-kit learn), data engineering (SQL), and statistics and experimental design (NHST)
- Lectured on more advanced topics (Clustering, PCA, NLP, Intro to Deep Learning, R + tidyverse for Python programmers)
- Taught enterprise training courses to corporate clients looking to up-skill current employees via week-long workshops
- Performed duties required as senior managerial role (hiring, administration)

### Vertitonic, Inc.

Summer, 2019

New York, New York (Remote)

- Consulted with agency on building tools to help sort audio logo catalogue
- Created prototype of tool to be used for clients to pre-test audio logos

### Long Gold Research Assistant

June, 2018

London, England

- Collected data at schools around England for longitudinal project looking at relationship between music and behavior
- Prepared and reported preliminary data analyses

**Soundscape Scientific Consultancy**

March, 2018 – May, 2019

London, England

- Acted as scientific consultant for project looking to verify effects of music on concentration, anxiety relief, and relaxation
- Consulted with composers (Michael Price, Hogni, Ben Lucas Boysen/Herq) at Erased Tapes record label to discuss musical material
- Oversaw experimental design using behavioral and physiological experiments
- Created experimental materials used in deployment of experiment and wrote all code for analysis, visualization of results
- Project culminated with publicity events in conjunction with release of tracks

**Attendee of Your Brain on Art Doctoral Consortium**

September, 2017

Valencia, Spain

- Received \$2,000 grant from National Science Foundation to attend and present research at conference
- Presented poster on modeling Aural Skills Performance [Poster]
- Served as scribe for talk sessions [Paper]
- Participated in Hackathon; Attempted to develop EEG Brain Computer Interface in collaboration with engineer where dancer could control lighting of environment

**Visiting PhD Student, Transforming Musicology**

June, 2016

Goldsmiths Computing Department, London, England

- Collaborated with various Transforming Musicology team members in data cleaning, analysis, and writing
- Presented various findings from Transforming Musicology Project at International Conference for Music Perception and Cognition in San Francisco, CA

**Research Assistant, Music Computation and Cognition Lab**

August 2014 – May 2015

Louisiana State University Music Theory Department, Baton Rouge, Louisiana

- Responsible for online data collection via MCCL@LSU server
- Designed and implemented experiments central to lab's research interests
- Attended to various details of lab administration (participation scheme, maintain/set-up equipment)
- Encoded symbolic data to Bebop corpus
- Created online jsPsych implementation of Gold-MSI Musical Sophistication Questionnaire [GitHub]

**Recording Technician, LSU Recording Studio**

August 2014 – May 2015

Louisiana State University School of Music, Baton Rouge, Louisiana

- Recorded recitals for School of Music performances in Recital Hall and local venues (ProTools and in-house equipment)
- Stage managed events, consisting of helping prepare and disassemble stage for performers
- Contracted for 150 hours over course of year

**Music Industry Consultant**

London, England

May 2015

- Developed tool for SliceThePie.com to measure and characterize music based on value judgments of users targeted at website's main demographics; tool is currently being used by Soundout [Paper]
- Aided with presentation at Academy Day Workshop at "Music, Brands, and Advertising: Testing What Works" at Audio Branding Academy 2015, Berlin, Germany, May 2015.
- Details from Audio Branding Academy presentation can be found in publications section

**Research Assistant, Transforming Musicology Project**

May 2015 – August 2015

Goldsmiths Psychology Department, London, England

- Analyzed Skin Conductance Response (SCR) and Heart Rate (HR) data for experiments related to research
- Oversaw two MSc. projects affiliated with Transforming Musicology project



- Digitally annotated audio files for Music Information Retrieval Machine Learning Project in collaboration with Birmingham University
- Wrote academic and general public articles for Transforming Musicology project for research dissemination

**Research Assistant, Transforming Musicology Project**

September 2014 – December 2014

Goldsmiths Psychology Department, London, England

- Conducted behavioral research investigating perception of musical structures as part of AHRC-funded project working together with Goldsmiths, University of London Computer Science Department and musicologists from University of Oxford.
- Research focused on perception of leitmotives in the music of Richard Wagner and included paradigms involving musical memory, skin-conductance response, as well as systematic research into compositional structure of musical materials.
- Findings presented at various academic and public events

**MSc Project Co-supervision with Dr. Daniel Müllensiefen**

March 2015 – August 2015

Goldsmiths Psychology Department, London, England

- Examining the Physiological Effects of Wagner's Ring Der Ring des Nibelungen: A Musicological Investigation, Emma Sewell
- Examining the Physiological Effects of Wagner's Ring Der Ring des Nibelungen: Laterality and EDA Measures, Jay McKenzie

**Teaching Assistant, Teach Yourself R!**

September 2014 – May 2015

Goldsmiths Psychology Department, London, England

- Provided support for informal course to introduce students to *R* programming language

**Individual Instruction, Trumpet Lessons**

July 2006 – 2013

Milwaukee, WI, Cleveland, OH, London, England

- Instructed students of various ages and abilities (Grade School – Senior Citizen) to play trumpet
- Have taught through various small Schools of Music, as well as privately

## AWARDS AND FUNDING

### Research Funding

LSU Dissertation Year Fellowship	\$18,00
LSU Department of Psychology Graduate Student Strategic Research Grant, December, 2016	\$1,000
Visiting PhD Student, Queen Mary, University of London, July 2016	£500
Visiting PhD Student, Transforming Musicology, June 2016	£2,000
Research and Administrative Assistant at Transforming Musicology, August - December 2015	£5,000

### Travel Funding

SEMPRE Travel Award, April 2018	€130
LSU Graduate Student Association Travel Award, South Carolina, March 2018	\$200
LSU School of Music Award Travel Award, South Carolina, February 2018	\$250
NSF Travel Grant to attend This is Your Brain on Art Conference in Valencia, Spain	\$2,000
LSU School of Music Travel Award, San Diego, July 2017	\$750
SMPC Student Travel Award, San Diego, July 2017	\$500
LSU School of Music Travel Award, Missouri, November 2016	\$500
Travel Bursary from Deutsche Gesellschaft für Musikpsychologie, August 2015	€100

### Education Funding and Scholarships

LSU Summer Institute on Future of Graduate Studies, May 2018	\$3,500
LSU Department of Psychology Graduate Assistantship (1 Year), Autumn 2017 – Spring 2018	\$13,000
LSU School of Music Graduate Assistantship (3 Years), Autumn 2015 – Spring 2017	\$33,000
Goldsmiths International Postgraduate Scholarship, September 2014–September 2015	£5,000
Baldwin Wallace University Presidents Scholarship	\$48,000
Baldwin Wallace University Directors Scholarship	\$4,000
Baldwin Wallace Griffiths Scholarship	\$1,000
Baldwin Wallace University Gloria B. Ewing Scholarship	\$1,500

## ACADEMIC PRESENTATIONS

**Baker, D.** (August, 2019). What is happening in a students mind when they perform melodic dictation?. Society for Music Perception and Cognition. New York, New York. [Talk]

**Baker, D.**, Kragness, H., Loui, P., Slevc, R., Upham, F., Vuvan, D. (May, 2019). Symposium on Open Science?. Society for Music Perception and Cognition. New York, New York. [Symposium]

**Baker, D.** (May, 2019). The Frequency Facilitation Hypothesis. Society for Music Perception and Cognition. New York, New York. [Poster]

Ma, Y., Elliott, E., **Baker, D.**, Davis, C., Vukovics, K. (May, 2019). Lyrics and Emotion in Songs: A Conceptual Replication Study of Ali and Peynircioglu, 2006. Society for Music Perception and Cognition. New York, New York. [Poster]

Vukovics, K., Elliott E., Ma, Y., **Baker, D.** (May, 2019). Does Musical Training Protect Against Auditory Distractions?. Society for Music Perception and Cognition. New York, New York. [Poster]

Simon, E., **Baker D.**, Monzingo, M., Elliott, E., Vuvan, D. (May, 2019). Musical Training Mediates the Relation Between Auditory Working Memory and Preference for Musical Complexity. Society for Music

Perception and Cognition. New York, New York. [Poster]

**Baker, D.** (May, 2019). What is going on in someones head when they do melodic dictation?. Pedagogy into Practice. Santa Barbara, California. [Read Paper]

**Baker, D.**(May, 2019). What is going on in someones head when they do melodic dictation?. Music Theory Midwest, Cincinnati, Ohio. [Read Paper]

**Baker, D.**(April, 2019). The Frequency Facilitation Hypothesis. Again & Again Musical Repetition in Aesthetics, Analysis and Experience. London, England [Read Paper]

**Baker, D.**(March, 2019). What is going on in someones head when they do melodic dictation? SEMPRE Graduate Conference. Cambridge, England. [Lightening Talk]

**Baker, D.**, Elliott, E., Shanahan, D., Ventura, J. Monzingo, E., Ritter, B., & Young, C. (July, 2018). Explaining Objective and Subjective Aspects of Musical Sophistication: Insights from General Fluid Intelligence and Working Memory. Proceedings of 2018 International Conference on Music Perception and Cognition. [Short Talk]

**Baker, D.**, Monzingo, E., & Shanahan, D. (July, 2018). Modeling Aural Skills Dictation. Proceedings of 2016 International Conference on Music Perception and Cognition. [Conference Poster]

Gran, J., **Baker, D.** (March, 2018). Root Interval Schemas in Rock Music. Music Theory South Central, University of Southern Mississippi. [Read Paper, Slides]

**Baker, D.** (March, 2018). Who counts as a Musician?, Music and Public Discourse, Columbia, South Carolina. [Video]

**Baker, D.**, Ventura, J., Shanahan, D., & Elliott, E. (November, 2017). Modeling Performance on Aural Skills Examinations, Music Informatics Group, Society for Music Theory. Arlington, VA Poster

**Baker, D.**, Ventura, J., Shanahan, D., & Elliott, E. (August, 2017). Modeling Performance on Aural Skills Examinations, This is Your Brain on Art. Valencia, Spain Poster

**Baker, D.** and Shanahan, D. (August, 2017). The Modeling and Perception of Melodic Similarity in Jazz Improvisation, Society for Music Perception and Cognition. San Diego, California [Poster]

Gran, J. and **Baker, D.** (August, 2017). A Relational Network Approach to Rock Music Syntax, Society for Music Perception and Cognition. San Diego, California [Poster]

**Baker, D.**, Ventura, J., Shanahan, D., & Elliott, E. (August, 2017). Validating the Goldsmiths Musical Sophistication Index in a Sample of American Participants, Society for Music Perception and Cognition. San Diego, California [Poster]

Ventura, J., **Baker, D.**, Elliott, E., & Shanahan, D. (August, 2017). Cognitive Abilities in Non-Musicians and Musicians: Does Musicality Matter? 125th Annual Convention of the American Psychological Association in Washington, D.C. Poster

**Baker, D.** and Müllensiefen, D. (November, 2016). Wagner, Leitmotives, and Music Informatics. Society of Music Theory, Music Informatics Special Interest Group. Vancouver, Canada [Short Talk]

Ventura, J., Elliott, E., **Baker, D.**, & Shanahan, D. (November, 2016). Investigating the Relationship between Musical Working Memory and Musical Sophistication in Non-Musicians. Poster to be presented at the 57th Annual Meeting of the Psychonomic Society in Boston, MA.[Poster Presentation]

**Baker, D.**, Müllensiefen, D. (2016) Perception of Leitmotives in Richard Wagner's *Der Ring des Nibelungen*. Proceedings of 2016 International Conference on Music Perception and Cognition. [Short Format Talk]

**Baker, D.**, Rosado, A, Shanahan, E., Shanahan, D. (2016) The Interaction of Schema-Driven Gestures and Instrumental Affordances in Bebop Improvisations. International Conference on Music Perception and Cognition, San Francisco, USA. [Long Format Talk]

**Baker, D.**, Trahan, T., Müllensiefen, D. (2016) Measuring Music To Brand Personality: A Semantic Differential Tool for Measuring Emotional Space. International Conference on Music Perception and Cognition. [Poster Presentation]

Blust, A., **Baker, D.**, Richard, K., Shanahan, D. (2016) Music, Animacy, and Rubato: What makes music sound human? International Conference on Music Perception and Cognition. [Poster Presentation]

**Baker, D.**, Müllensiefen, D. (2016) Hearing Wagner: Physiological Responses to Richard Wagners Der Ring des Nibelungen. Proceedings of 2016 International Conference on Music Perception and Cognition. [Poster Presentation]

**Baker, D.**, Rindfleisch, C., Müllensiefen, D. (2015) Parsifal and the effect of narrative on unconscious arousal. Presentation given at Society of Music Perception and Cognition (SMPC) 2015, Nashville, TN, 4th of August. [Conference Talk]

Müllensiefen, D., **Baker, D.** (2015) Music in Advertising: Testing What Works. Presentation given at Audio Branding Academy 2015 (ABA) 2015, Berlin, Germany, 27th of May. [Industry Workshop]

Müllensiefen, D. **Baker, D.** (2014) The Ring Cycle Experiment. Presentation given at 'Hearing Wagner' event part of AHRC Being Human Festival, Birmingham, England, UK, 22nd of November. [Public Outreach Talk]

**Baker, D.** Psychology of Leitmotives in Wagner: Two Studies on Cue Abstraction. Presentation given at SysMus14, London, England, UK, 20th September. [Graduate Student Conference Talk]

**Baker, D.**, Albrecht, H. (2014) The Psychology of Leitmotive Processing in Richard Wagner's Music: Evidence from Two Memory Experiments. Presentation give at Deutsch Gesellschaft fur Musikpsychologie, Fraunhofer, Germany, September 2014. [Conference Talk]

Müllensiefen, **Baker, D.**, D., Rhodes, C., Crawford, T., Dreyfus, L. (2014). Recognition of leitmotives in Richard Wagner's music: chroma distance and listener expertise. Presentation given at 2014 European Conference on Data Analysis (ECDA) 2014, Jacobs University, Germany, July 2014 [Conference Talk]

**Baker, D.** (2014) Salience and Memorability of Wagner's Leitmotives as a Function of Listener's Experience. Presentation give at OBERTO Graduate Student Conference, Oxford, England, UK, July 2014. [Graduate Student Conference Talk]

## VOLUNTEER WORK

### Research and Evaluation Residential Voluntary Worker

June 2018 – March 2019

London, England

- Used a Participatory Action Research (PAR) research with local communities
- Topics researched included financial capability, mental health support for advice users, private renting, poverty premium, and support for young people.
- Organized first ever Toynbee Hall Datathon partnering community organizations and data scientists for #DataForGood event

## PROFESSIONAL WORKSHOPS

Theorizing Categorically: Film Music and Beyond with Scott Murphy. Graduate Student Workshop, South Central Society for Music Theory, Hattiesburg, MS, 2018.

Film Music: Cognition to Interpretation with Dr. Juan Chattah. Graduate Student Workshop, Music Theory South East, Columbia, SC, 2018.

Schubert: Text and Music with Dr. Jeffery Perry. Graduate Student Workshop, South Central Society for Music Theory, Memphis, TN, 2017.

Music Informatics Group Workshop on Computational Music Analysis. Green College, University of British Columbia, Canada. November, 2016.

Introduction to Empirical Musicology Summer School, Summer 2012. Dr. David Huron. Ohio State University, Ohio

## PROFESSIONAL SERVICE

Volunteer, SMT40, Arlington, VA

Volunteer, SysMus17 Conference, London, England

Peer Reviewer, SysMus17 Conference, London, England

Volunteer, AMS-SMT Vancouver Conference, Vancouver, Canada

Volunteer, SMT 38, St. Louis, Missouri

## PUBLIC MUSICOLOGY

### Blog Posts

Baker, D. (2018). Hire Me (As A Datascientist!) Parts I–V. Personal Blog.

Baker, D. (2015). Introducing Wagnerism! Transforming Musicology Project Blog.

Baker, D. (2015). Listening for Leitmotives . Transformign Musicology Project Blog.

Baker, D. (2014). Music, Science, and Pleasure. Bachtrack.com.

Baker, D. (2014). Music Cognition as a Career Path. MajoringInMusic.com.

### Collaborative Works

Collaborated with 12tone on distilling talk about "Who Counts as a Musician" on Youtube channel VIDEO

Appeared as guest on **So Strangely** podcast discussing paper on scale degree qualia. Link to Podcast

### Public Talks

Baker, D. (2014). Music: It's All In Your Head! Ronnie Gardner Method, North London

## COURSEWORK

### *Ph.D Coursework, Major Area, Music Theory*

Lecturer

Louisiana State University, School of Music, Baton Rouge, USA

Major Area Advisor: Dr. Daniel Shanahan

- Music Cognition, Autumn 2017
- Transformational Theory, Autumn 2017
- Vocal Music Lessons, Summer 2017
- Film Music, Summer 2107
- Schenkerian Analysis, Spring 2017
- Music Theory Pedagogy, Spring 2017
- History of Music Theory II, Spring 2017
- American Music, Autumn 2016
- Computer Music (Max/MSP), Autumn 2016,
- Research Methods, Autumn 2016
- Independent Study, Summer 2016, Queen Mary Visiting PhD Studentship
- Computational Musicology and the Digital Humanities, Spring 2016
- History of Music Theory I, Spring 2016
- Schenkerian Analysis, Spring 2016
- Post Tonal Analysis, Autumn 2015
- Soviet Music, Autumn 2015
- History of Electroacoustic Music, Autumn 2015

Dr. Daniel Shanahan  
Dr. Robert Peck  
Dr. Loraine Sims  
Dr. Blake Howe  
Dr. Inessa Bazayev  
Dr. Inessa Bazayev  
Dr. Daniel Shanahan  
Dr. Brett Boutwell  
Dr. Jesse Allison  
Dr. Dan Isbell  
Dr. Daniel Shanahan  
Dr. Daniel Shanahan  
Dr. Allison McFarland  
Dr. Jeffery Perry  
Dr. Robert Peck  
Dr. Inessa Bazayev  
Dr. Jesse Allison

### *Ph.D Coursework, Minor Area, Psychology*

Lecturer

Louisiana State University, Psychology Department, Baton Rouge, USA

Minor Area Advisor: Dr. Emily Elliot

- Advanced Statistics, Spring 2017
- Intermediate Statistics, Autumn 2016
- Independent Study, Autumn 2017
- Neuroimaging (fMRI), Autumn 2017

Dr. Jason Harmon  
Dr. Jason Hicks  
Dr. Emily Elliot  
Dr. Steven Greening

### *Non-Degree Coursework*

Lecturer

Online Correspondence

- *Learn perl*, Stanford University, Summer 2016

Dr. Craig Sapp

### *Masters Coursework*

Lecturer

Goldsmiths Psychology Department, London, England

- Research Skills, Autumn 2013
- Music Perception, Autumn 2013
- Statistics and Experimental Design, Autumn 2013–Spring 2014
- Cognitive Neuroscience of Music, Spring 2014
- Biological Aspects of Brain Function
- Methods and Techniques of Neuroscience
- Thesis, Summer 2014

Dr. Lauren Stewart  
Dr. Daniel Müllensiefen  
Dr. Rory Allen  
Dr. Lauren Stewart  
Dr. Gianna Cocchini  
Dr. Joydeep Bhattacharya  
Dr. Daniel Müllensiefen

## COMPUTATION AND ANALYSIS

### Statistical Analysis Experience

- Regression, Multiple Regression, ANOVA, MANOVA, Post Hoc Testing, Correlation, Exploratory and Confirmatory Factor Analysis, t-tests, Item Response Theory, Signal Detection, Q Methodology, Chi-Squared, Mixed Effect Models
- Examples of analyses listed above have either been used in previous research, publications, or covered in coursework

### Programming Languages

- Intermediate Knowledge: *R*
  - Package Familiarity: ggplot2, data.table, psych, stringr
- Basic Familiarity: bash, Javascript (jsPsych package), Max/MSP
- Sample code and analyses available on request or via my Github

### Software Familiarity

- Humdrum, Sonic Visualiser, Audacity, PhotoScore Ultimate (OMR), MuseScore, Finale, Sibelius, Ledalab (Matlab for EDA Analysis), Moodle 3, Terminal, SPSS

## SELECT MUSICAL ACCOMPLISHMENTS

### Musical Training

- Studied Trumpet with Jack Sutte, 2nd Trumpet of The Cleveland Orchestra 2008 – 2012
- Studied Trumpet with Mark Niehaus, 1st Trumpet Milwaukee Symphony Orchestra 2011 – 2012
- Studied Trumpet with Jack Brndiar, 1st Trumpet of Cleveland Chamber Orchestra 2008 – 2012
- Studied Conducting with Vincent Danner, Frm. Assc. Cond. Memphis Symph Orch 2011– 2012

### Musical Performances

- Appeared on various Sat. Nite Duets albums (Trumpet) 2013 – 2016
  - Andi Action Redeption Song - Air Guitar, 2016
  - Electric Manland - Swan Blvd, 2013
  - Summer of Punishment - Black Moriah, 2012
  - Summer of Punishment - Off the Chain, 2012
  - Hymn for Two American Horns, 2011 (Composed and Performed)
- Performed as Principal Trumpet of Goldsmiths Sinfonia 2013 – 2014
- Performed with Sat. Nite Duets at Pabst Theatre 2013
- Conducted select pieces at BW Concert Wind Ensemble April 2012
- Featured Soloist with BW Wind Ensemble: Bugler's Holiday April 2012
- Invited to play in Severance Hall Master Class Series with Lyle Steelman
- Freelance Musician and Private Instructor in Greater Cleveland Area

## MEMBERSHIPS

Society of Music Perception and Cognition, Student Member  
Society of Music Theory, Graduate Student Member  
South Central Society of Music Theory, Graduate Student Member

## REFERENCES

Dr. Daniel Shanahan, Assistant Professor of Music Theory at The Ohio State University  
shanahan.37@osu.edu

Dr. Emily Elliott, Professor of Psychology at Louisiana State University  
eelliott@lsu.edu

Dr. Robert Peck, Professor of Music Theory at Louisiana State University  
rpeck@lsu.edu

Dr. Jason Harman, Professor of Psychology at Louisiana State University  
jharman@lsu.edu

Dr. Daniel Müllensiefen, Reader at Goldsmiths Psychology Department, University of London  
d.muellensiefen@gold.ac.uk