

Exponent®
Engineering & Scientific Consulting

Jessica Nave-Blodgett, Ph.D.

Managing Scientist | Human Factors
Phoenix
+1-623-587-4196 | jnaveblodgett@exponent.com

Professional Profile

Dr. Nave-Blodgett is a cognitive psychologist with expertise in human sensation and perception, attention, audition and visibility, information processing, and memory. She applies her knowledge and expertise to analyses of accidents and injuries, safety and warnings compliance, consumer decision-making, and driver behavior.

Dr. Nave-Blodgett has specific expertise in how individuals perceive, attend, and understand events in their auditory environment, including questions of sound audibility, how individuals separate multiple sound sources in a confusing or sound-rich environment, and individuals' ability (or inability) to identify changes in complex and information-rich auditory environments. She has applied her knowledge and experience to investigations of human performance issues with respect to pedestrian, cyclist, and transportation accidents and injuries, information processing and communication of risk, and individuals' compliance with warnings. Dr. Nave-Blodgett has also performed evaluations of consumer product safety information and warnings across a variety of consumer products including kitchen appliances, household appliances, and vehicles. Dr. Nave-Blodgett additionally performs quantitative injury and risk-analyses using large-scale incident and injury data from various sources, including the Consumer Product Safety Commission's (CPSC) National Electronic Injury Surveillance System (NEISS), and the National Highway Traffic and Safety Administration's (NHTSA) Non-Traffic Surveillance (NTS) database.

Dr. Nave-Blodgett has extensive experience conducting human-subjects testing to address a variety of human factors and human performance questions. She has conducted human-subjects testing investigating and assessing consumer product use in naturalistic settings, evaluating health and safety issues, investigating warnings and instructions compliance, and to understand consumer decision-making and purchase decisions. Dr. Nave-Blodgett also conducts driving research in closed-course track and handling pad environments and in naturalistic open-road driving settings. She has also performed research into driver gaze, attention, and interaction with automated and non-automated driving systems on highways and urban streets. Her research and expertise have also been applied to investigate questions related to perception of auditory and visual alerts in vehicle human-machine interfaces (HMIs) and warnings, and auditory information both inside and outside the vehicle during the driving task. Dr. Nave-Blodgett has also conducted research on driver reactions and handling behavior in response to unexpected in-vehicle and out-of-vehicle events, and research into driver gear-shifting behaviors in situations where drivers are engaged in secondary tasks. She has incorporated eye tracking, qualitative interviews, psychophysics, and observational techniques to answer questions about driver behavior, user experience, and consumer understanding of disclosures. Her expertise in research and experimental design is complemented by her ability to effectively communicate complex scientific concepts and knowledge to a wide variety of professional and community audiences.

Prior to joining Exponent, Dr. Nave-Blodgett completed her Ph.D. at the University of Nevada, Las Vegas, where she studied auditory perception, the development of auditory processing, attention, cognition, and human lifespan development. She also collaborated on studies of auditory perception that examined

© 2026 Exponent, Inc. All Rights Reserved

individual differences in the ability to perceptually separate multiple sound sources in a confusing environment, and individuals' ability (or inability) to identify changes in complex auditory environments.

Academic Credentials & Professional Honors

Ph.D., Psychology, University of Nevada, Las Vegas, 2020

M.A., Psychology, University of Nevada, Las Vegas, 2016

B.A., Psychology, University of Maryland, Baltimore County, 2012

B.A., Music Theory/Composition, McDaniel College, 2006

Licenses and Certifications

Certified English XL Tribometrist (CXLT)

Academic Appointments

Graduate Instructor of Record, Introduction to Psychology, University of Nevada, Las Vegas, 2015-2017

Prior Experience

Lab Manager, Auditory Cognitive Development Lab, University of Nevada, Las Vegas, 2015-2020

Professional Affiliations

Human Factors and Ergonomics Society

Acoustical Society of America

The Psychonomic Society

Society for Music Perception

Publications

Colling KM, Nave-Blodgett JE, Yerkes BD, Lester BD. Organic and Non-Organic Consumer Knowledge, Values, and Information Seeking Behavior. Proceedings of the Human Factors and Ergonomics Society Annual Meeting, 2025. https://doi.org/10.1177/10711813251360000

O'Connell, SR, Nave-Blodgett, JE, Wilson, GE, Hannon, EE, Snyder, JS. Elements of musical and dance sophistication predict musical groove perception. Frontiers in Psychology 2022; 13: 998321. https://doi.org/10.3389/fpsyg.2022.998321

Nave-Blodgett JE, Snyder JS, Hannon EE. Auditory superiority for perceiving the beat level but not measure level in music. Journal of Experimental Psychology: Human Perception and Performance 2021; 47(11): 1516-1542. https://doi.org/10.1037/xhp0000954

Higgins, NC, Monjaras, AG, Yerkes, BD, Little, DF, Nave-Blodgett, JE, Elhiali, M, Snyder JS. Resetting of auditory and visual segregation occurs after transient stimuli of the same modality. Frontiers in Psychology 2021; 12: 720131. https://doi.org/10.3389/fpsyg.2021.720131

Nave-Blodgett JE, Snyder JS, Hannon EE. Hierarchical beat perception develops throughout childhood

and adolescence and is enhanced in those with musical training. Journal of Experimental Psychology: General 2021; 150(2): 314-339. DOI: https://doi.org/10.1037/xge0000903

Hannon EE, Nave-Blodgett JE, Nave KM. The Developmental Origins of the Perception and Production of Musical Rhythm. Child Development Perspectives 2018; 12(3): 194-198. DOI: https://doi.org/10.1111/cdep.12285

Hannon EE, Schachner AD, Nave-Blodgett JE. Babies know bad dancing when they see it: Older but not younger infants discriminate between synchronous and asynchronous audiovisual musical displays. Journal of Experimental Child Psychology 2017; 159: 159-174. DOI: https://doi.org/10.1016/j.jecp.2017.01.006

Provine RR, Cabrera MO, Nave-Blodgett J. Red, yellow, and super-white sclera: Uniquely human cues for healthiness, attractiveness, and age. Human Nature 2013; 24(2): 126-136. DOI: https://doi.org/10.1007/s12110-013-9168-x

Provine RR, Cabrera MO, Nave-Blodgett J. Binocular symmetry/asymmetry of scleral redness as a cue for sadness, healthiness, and attractiveness in humans. Evolutionary Psychology 2013, 11(4): 873-884. DOI: https://doi.org/10.1177%2F147470491301100411

Provine RR, Nave-Blodgett J, Cabrera MO. (2013) The emotional eye: Red sclera as a uniquely human cue of emotion. Ethology 2013; 119: 993-998. DOI: https://doi.org/10.1111/eth.12144

Presentations

Leslie JW, Snyder J, Hegde S, Soley G, Ogunlade Y, Nave-Blodgett JE, Hannon, EE. The “Foreign music effect”: Listening experience influences perception of musical tempo. Podium presentation, 2024 biennial meeting of the Society for Music Perception and Cognition, Banff, Alberta, Canada, August 2024.

Leslie JW, Nave-Blodgett JE, Hegde S, Ogunlade O, Soley G, Hannon, EE. Influence of familiarity on musical tempo judgements across cultures. Podium presentation, 2022 biennial meeting of the Society for Music Perception and Cognition, Portland, Oregon, August 2022.

O’Connell SR, Nave-Blodgett JE, Wilson G, Hannon EE, Snyder JS. Exploring the relation between musical and dance sophistication and musical groove perception. Poster presentation, 2022 biennial meeting of the Society for Music Perception and Cognition, Portland, Oregon, August 2022.

Snyder JS, Nave-Blodgett JE, Nave KM, Hannon EE. Musical beat and meter perception in western children and young adults. Podium presentation, New England Sequencing and Timing Conference, online, April 2021.

Leslie, JW, Nave-Blodgett JE, Hegde S, Ogunlade O, Soley G, Hannon EE. Development of cultural familiarity influences perception of tempo. Poster presentation, 19th annual Auditory Perception, Cognition, and Action Meeting (APCAM), online, November 2020.

Monjaras AG, Higgins NC, Yerkes BD, Little DF, Nave-Blodgett JE, Elhiali M, Snyder JS. Resetting of auditory and visual segregation occurs only after transient stimuli of the same modality. Poster presentation, 43rd Midwinter Meeting of the Association for Research in Otolaryngology, San Jose, CA, January 2020.

Leslie JW, Nave-Blodgett JE, Hannon EE. American listeners perceive culturally unfamiliar music as faster than culturally familiar music, regardless of actual tempo. Poster presentation, Biennial Meeting of the Society for Music Perception & Cognition, New York, NY, August 2019.

Nave-Blodgett JE, Snyder JS, Hannon EE. Finding common time: Sensitivity to the beat in culturally familiar and unfamiliar music is related to speech segmentation ability. Podium presentation, Biennial

Meeting of the Society for Music Perception and Cognition, New York, NY, August 2019.

Nave-Blodgett JE, Snyder JS, Hannon EE. Influences of cultural familiarity and metrical complexity on sensitivity to musical meter. Poster presentation, 17th Rhythm Perception & Production Workshop, Traverse City, MI, June 2019.

Nave-Blodgett JE, Leslie JW, Hannon EE. American listeners perceive culturally unfamiliar music as faster than culturally familiar music, regardless of actual tempo. Podium presentation, New England Sequencing and Timing Conference, Storrs, CT, April 2019.

Higgins NC, Yerkes BD, Little DF, Nave-Blodgett JE, Elhilali M, Snyder JS. Modality-specific resetting of segregation during bistable perception of auditory streams. Poster presentation, 42nd MidWinter Meeting of the Association for Research in Otolaryngology, Baltimore, MD, February 2019.

Nave-Blodgett JE, Oswinn LD, Hannon EE. Finding the common time: Similarities and differences in the temporal aspects of speech and music perception. Podium presentation, New England Sequencing and Timing Conference, Storrs, CT, April 2018.

Nave-Blodgett JE, Hannon EE, Snyder JS. The Development of hierarchical beat perception: Effects of age on perception of musical meter. Poster presentation, Annual Mid-Winter Meeting of the Association for Research in Otolaryngology, San Diego, CA, February 2018.

Nave-Blodgett JE, Snyder JS, Hannon EE. The prolonged development of beat and meter perception: Evidence from children, adolescents, and adults. Podium presentation, Biennial Meeting of the Society for Music Perception and Cognition, La Jolla, CA, August 2017.

Leslie JW, Romero A, Nave-Blodgett JE, Hannon EE, Snyder JS. Investigating perception of meter in diverse populations through online testing. Poster presentation. Poster presentation, Biennial meeting of the Society for Music Perception and Cognition, La Jolla, CA, August 2017.

Nave-Blodgett JE, Hannon EE, Snyder JS. Acquisition of musical rhythm and beat during childhood. Poster presentation, Biennial Meeting of the Society for Research in Child Development, Austin, TX, April 2017.

Snyder JS, Nave KM, Nave-Blodgett JE, Hannon EE. EEG responses to musical beat induction and detection in adult listeners. Podium presentation, International Society for Behavioral Neuroscience annual meeting, Las Vegas, NV, 2017.

Hannon EE, Nave-Blodgett JE, Nave KM, Snyder JS. The development of beat processing in children. Podium presentation, International Society for Behavioral Neuroscience annual meeting, Las Vegas, NV, 2017.

Nave-Blodgett JE, Snyder JS, Hannon EE. The prolonged development of beat and meter perception: Evidence from children, adolescents, and adults. Podium presentation, New England Sequencing and Timing Conference, Storrs, CT, March 2017.

Hannon EE, Nave-Blodgett JE, Snyder JS. Effects of age and modality on children's perception of musical meter. Poster presentation, 5th Joint Meeting of the Acoustical Society of America and Acoustical Society of Japan, Honolulu, HI, 2016.

Nave-Blodgett JE, Hannon EE, Snyder JS. Auditory and visual beat and meter perception in children. Podium presentation, International Conference on Music Perception and Cognition (ICMPC) 14, San Francisco, CA, July 2016.

Nave-Blodgett JE, Hannon EE, Snyder JS. Perception of auditory and visual disruptions to the beat and meter in music. Poster presentation, International Conference on Music Perception and Cognition

(ICMPC) 14, San Francisco, CA, July 2016.

Nave-Blodgett JE, Snyder JS, Hannon EE. Perception of auditory and visual disruptions to the beat and meter in music. Podium presentation, New England Sequencing and Timing Conference, Amherst, MA, March 2016.

Nave-Blodgett JE, Snyder JS, Hannon EE. Perception of auditory and visual disruptions to the beat and meter in music. Poster presentation, Association for Research in Otolaryngology Midwinter Meeting, San Diego, CA, February 2016.

Nave-Blodgett JE, Hannon EE, & Snyder JS. Do people hear multiple levels of metrical hierarchies in music? Podium presentation, Society for Music Perception and Cognition biennial meeting, Nashville, TN, August 2015.

Nave-Blodgett JE, Hannon EE, Snyder JS. Do people hear multiple levels of metrical hierarchies in music? Podium presentation, New England Sequencing and Timing (NEST) Conference, Amherst, MA, March 2015.

Provine RR, Cabrera MO, Spangler S, Nave-Blodgett J, Dorizan S, Kennedy I, Koehler J. When the whites of the eyes are red, yellow and super-white: A uniquely human communication medium. Poster presentation, Society for Neuroscience Annual Meeting, Washington DC, 2011.

Project Experience

Investigated driver foot-pedal behavior when operating battery-electric passenger vehicles in regenerative braking mode.

Examined commercially available driver monitoring assistance technologies in passenger vehicles.

Evaluated driver behavior, mental models, and trust in Advanced Driver Assistance Systems (ADAS) using naturalistic on-road testing.

Investigated driver steering and lane-maintenance behavior in response to unexpected in-vehicle events affecting vehicle components.