



**Exponent**<sup>®</sup>  
Engineering & Scientific Consulting

**Jordan Bailey, Ph.D.**

Senior Scientist | Human Factors

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## Professional Profile

Dr. Bailey is a human factors professional and Board Certified Behavior Analyst with expertise in operant behavioral economics, statistical decision science, and human performance. He uses his training as a behavior analyst to analyze behavior in a wide variety of safety and human performance contexts.

Dr. Bailey conducts proactive quantitative, semi-quantitative, and qualitative risk assessments, which help clients understand how people interact with products and processes with varying probabilities and severities of consequences. He can also analyze and explain purchase decisions such as those commonly made in consumer class actions involving product liability, false advertising, or product labeling. As part of his expertise in behavioral economics, he can assist in the development of programs aimed at increasing behavioral compliance with products, instructions and warnings, policies, and treatments.

Dr. Bailey assists clients with analyses of scientific literature regarding human performance, as well as regulatory and voluntary consensus standards that apply to products, policies, and services. He can provide expert analysis and testimony in cases that involve issues such as decision making, learning, sensation and perception, and in cases that require analysis of the influence of competence and motivation on behavior in workplace and consumer settings. He also assists clients in their development of user manuals, labels, and warnings.

Dr. Bailey has specialized experience working with at-risk populations, including older adults with neurocognitive disorders, and older adults, adults, and children with developmental disabilities. He has significant experience with individualized education plans and the right to effective treatment within schools and adult care facilities. Given this experience, he is familiar with accommodations in a variety of contexts. Areas in which Dr. Bailey has conducted and published research include medication adherence, prediction and behavioral intervention in chronic illness, functional assessment of problem behavior, and preference assessment.

As a complement to behavior analysis, Dr. Bailey uses his expertise in statistical decision science, including machine learning, to estimate the probabilities with which certain behaviors may occur. He has deployed statistical models in medicine and behavioral health. These models are used to inform efficient treatment. Dr. Bailey has substantial experience with exploratory data analysis and data organization. He can help clients identify valuable combinations of variables for data science projects involving human behavior. Dr. Bailey also has significant experience with group and single-subject (small N) research designs.

Prior to joining Exponent, Dr. Bailey served as a behavior analyst in a variety of roles. He served as a clinician for multiple companies who provided applied behavior analysis therapy for individuals with developmental disabilities. Dr. Bailey also completed a research assistantship for a community mental health organization where his role consisted of providing treatment plans for adults with mental illness or

developmental disabilities and severe behavior. Dr. Bailey began his post-doctoral career as an assistant professor at Franciscan Missionaries of Our Lady University in Baton Rouge, Louisiana. He also served as a research consultant for DynamiCare Health in Boston, Massachusetts.

### Academic Credentials & Professional Honors

Ph.D., Psychology (Behavior Analysis), Western Michigan University, 2020

M.A., Applied Behavior Analysis, Ball State University, 2014

B.S., Psychology, Grand Valley State University, 2011

WMU Graduate Student Research Grant

### Licenses and Certifications

Board Certified Behavior Analyst by the Behavior Analysis Certification Board

Board Certified Behavior Analyst by the Behavior Analysis Certification Board (WA)

OSHA #511 Occupational Safety and Health Standards for General Industry

### Academic Appointments

Assistant Professor (Applied Behavior Analysis/Psychology), Psychology Department, Franciscan Missionaries of Our Lady University, (2020-2021)

Adjunct Professor (Human Development), Liberal Arts and Sciences, Kalamazoo Valley Community College

Instructor (Psychology of Aging), College of Arts and Sciences, Western Michigan University

Graduate Teaching Assistant, College of Arts and Sciences, Western Michigan University

### Prior Experience

Research Consultant – DynamiCare Health

Assistant Professor (Psychology) – Franciscan Missionaries of Our Lady University

Research Assistant – Western Michigan University/Summit Pointe

Consultant & Clinical Support Manager – Novel Responses, Inc.

Assistant Consultant – Behavior Analysis Center for Autism

### Professional Affiliations

Behavioral Gerontology Special Interest Group

American Society of Safety Professionals

## Publications

Bailey, J. D., & DeFulio, A. (2022). Predicting Substance Use Treatment Failure with Transfer Learning. *Substance Use & Misuse*. <https://doi.org/10.1080/10826084.2022.2125272>

Lanovaz, M. J., & Bailey, J. D. (2022). Tutorial: Artificial Neural Networks to Analyze Single-Case Experimental Designs. *Psychological Methods*. DOI: 10.1037/met0000487

Lepper, T. L., Bailey, J. D., Topham, M. N. et al (2022). Toward a Data-based Approach to the Selection of Applied Behavior Analysis Program Characteristics. *Behav Analysis Practice* (2022). <https://doi.org/10.1007/s40617-022-00740-6>

Bailey, J. D., Baker, J. C. Rzeszutek, M. J., & Lanovaz, M. J. (2021). Machine Learning for Supplementing Behavioral Assessment. *Perspectives on Behavior Science*. DOI:10.1007/s40614-020-00273-9

Wagner, S., Buchanan, J. A., Bailey, J. D., Andresen, F. J., & Omlie, C. (2019). The Use of Stimulus Preference Assessments for Persons with Neurocognitive Disorder: A Literature Review. *Clinical Gerontologist*, 1 — 13. DOI: 10.1080/07317115.2019.1670313

## Presentations

Bailey, J. D., Baker, J. C., (2019, May). Operant Assessment of Neurocognitive Disorder Using a Multielement Design. In H. Hughes (Chair), *Reinforcement Considerations when Working with Older Adults with Neurocognitive Disorders*. Symposium conducted at the meeting of the Association for Behavior Analysis International conference, Chicago, IL.

Bailey, J. D., Baker, J. C., (2019, February). Operant Assessment of Neurocognitive Disorder Using a Multielement Design. In H. Hughes (Chair), *Reinforcement Considerations when Working with Older Adults with Neurocognitive Disorders*. Symposium conducted at the meeting of the Behavior Analysis Association of Michigan, Ypsilanti, MI.

Bailey, J. D., Baker, J. C., (2018, May). The effects of reinforcement and extinction on responding by older adults with cognitive impairment. In M. Kim (Chair), *Reinforcement Considerations when Working with Older Adults with Neurocognitive Disorders*. Symposium conducted at the meeting of the Association for Behavior Analysis International conference, San Diego, CA.

Bailey, J. D., Baker, J. C., (2018, February). Behavioral assessment and treatment for improving adherence to congestive heart failure medications. In M. Kim (Chair), *Behavioral Gerontology Applications from Basic to Applied Research in Older Adults with Neurocognitive Disorder*. Symposium conducted at the meeting of the Behavior Analysis Association of Michigan, Ypsilanti, MI.

Bailey, J. D., Baker, J. C., (2018, February). The effects of reinforcement and extinction on responding by older adults with cognitive impairment. In M. Kim (Chair), *Reinforcement Considerations when Working with Older Adults with Neurocognitive Disorders*. Symposium conducted at the meeting of the Behavior Analysis Association of Michigan, Ypsilanti, MI.

## Research Grants

Graduate Student Research Grant – Western Michigan University

## Peer Reviews

The Analysis of Verbal Behavior

The American Journal of Drug and Alcohol Abuse

Behavior Analysis in Practice

The Journal of Applied Behavior Analysis