

Interdisciplinary Research (IDR) Origination Awards

Project Title

Title: Examining the Relationship Between Storytelling, Neural Coupling, and Social Belonging

Principal Investigator(s) (full-time faculty)

Name (PI listed first)	Department	College
Mat Duerden	ExDM	MSB
Dan Dewey	Linguistics	Humanities
Jamin Rowan	English	Humanities
Camilla Hodge	ExDM	MSB

Track

Track two

Abstract

The last decade has seen a dramatic increase in the rise of polarization and tribalism around the globe. Research efforts to understand effective ways to counteract these trends hold importance for both individuals, organizations, and policy makers. Our proposed research agenda aims to examine the associations between storytelling, neural coupling, and social connection. Neural coupling occurs when activity patterns in the brains of interacting individuals synchronize. Existing research suggests neural coupling between storytellers and listeners regularly occurs, and some of this research uses functional near infrared spectroscopy (fNIRS), a technology only recently available on the BYU campus. Other types of synchronicity (e.g., affective) have been linked to increased social connection. Whether the same increase in social connection arises between storytellers and audience members, and whether neural coupling drives such an increase, is unknown. Thus, we seek to understand, using a mixed methods approach, how storytelling and narrative structure affects neural coupling and social connection, using fNIRS to observe neural activity in storytellers and audiences along with quantitative surveys, and interviews. Findings will hopefully provide insights into the effectiveness of storytelling as a tool to build social connection to counteract polarization.

Summary of Plans for External Funding

- Research on Biopsychosocial Factors of Social Connectedness and Isolation on Health, Wellbeing, Illness, and Recovery (R01 Basic Experimental Studies with Humans Required) - NIH – June 21
 - This funding opportunity announcement (FOA) invites research projects that seek to explain the underlying mechanisms, processes, and trajectories of social relationships and how these factors affect outcomes in human health and well-being.
- National Humanities Center – Scholar Fellowship Program - July 1
- National Endowment for the Humanities: Collaborative Research Grant – November 27

Project Narrative

Background & Problem Statement

With increasing polarization and tribalism (Schoenmueller et al., 2023), better understanding the mechanisms to counteract these trends is critical. Some research suggests that increasing individual competencies such as high quality listening is a productive approach (Itzhakov et al., 2023, 2024). While engaging in high quality listening appears to be a potential way to decrease prejudice and promote humility, what individuals are listening to obviously matters. Stories, especially stories that incorporate vulnerable aspects of an individual's lived experience, seem to be effective in building social connection and empathy (Barnes, 2019; Palacios et al., 2015).

Stories and storytelling have served as a means of promoting understanding, social connection, and culture across time and people. Research suggests that storytelling can serve as a primary source of identity and meaning for individuals (Smith, 2017). Although ample research supports the efficacy of storytelling to promote a variety of mental, social, and behavioral outcomes (Alawafi et al., 2021; Lucarevski, 2016; Ramamurthy et al., 2023), research is still needed to understand how storytelling and story listening impacts involved individuals both in terms of neural functioning and social connections. A close examination of these impacts may also prove useful in understanding how to leverage storytelling and listening as approaches to alleviate polarization and tribalism.

The Current Project

The focus of this research is to examine the potential relationship between storytelling, neural coupling, high quality listening, and social belonging. Neural coupling describes when interacting individuals' brains begin to exhibit similar activity patterns. Existing research suggest a relationship between storytelling and neurological activity among storytellers and listeners (Stephens et al., 2010; Suzuki et al., 2018). More recent research has been able to use functional near infrared spectroscopy (fNIRS) to simultaneously study the neural functioning of storytellers and listeners (Chang et al., 2024; Ohad & Yeshurun, 2023). The current study seeks to understand how various storytelling and narrative structure elements (e.g., needs, complications, insights, rising action, climax) (Moth et al., 2023) influence neural coupling. Additionally, the study seeks to understand if connections exist between storytelling, neural coupling, storytelling efficacy, high quality listening (Itzhakov et al., 2024), and individual perceptions of social belonging.

This multi-phase study will examine the process and impact of teaching storytelling on both teachers and students, and how storytelling and listening influences perceptions of social belonging. This study will observe student facilitators and student participants in a storytelling workshop series at BYU. Participants in this series will be preparing to share personal stories at a campus-wide story slam event. To participate in the event, students must participate in a series of four storytelling workshops. Dr. Duerden and Dr. Rowan will oversee the design of these workshops, which will be based upon the curriculum they developed for the unexpected connections course they taught in the BYU Honors program entitled "The Art of Transformative Storytelling." At the end of the student facilitated workshop series, student participants will have the opportunity to share their story with other members of the BYU community at a Story Slam event.

The study's research team will investigate the workshop series and storytelling events to better understand the following based upon both neural and self-report data:

- How the workshop series impacts student facilitators and participants':
 - Sense of social connection to each other
 - Sense of social connection to the broader BYU community
 - Storytelling efficacy
 - If the workshop series increases storytelling efficacy among participants

- How the Story Slam events impacts storytellers and listeners in the following areas:
 - The degree to which storytellers and listeners experience neural synchronicity.
 - The degree to which listeners experience neural synchronicity among each other.
 - The degree to which neural synchronicity correlates to a sense of belonging or connectedness.
 - How different storytelling elements (e.g., articulation of need, complications, insight delivery) initiate different types of neural activity (e.g., problem solving, organizing, social activity).
 - If specific storytelling elements are more critical to achieving neural synchronicity than others (i.e., what kinds of stories or storytelling elements are most likely to create neural synchronicity and therefore social connectivity).
 - If there is a difference in the type of social connectedness storytellers experience and that listeners experience; do these differences correlate to neural activity in any way.

The goal is to run a workshop series and story slam event once during both fall and winter semesters over the course of the study.

Building on Previous Research & Collaborations

Drs. Duerden, Dewey, Rowan, and Hodge began conducting interdisciplinary research on the impact of storytelling on social connection in 2023. Prior to this collaboration, Drs. Duerden and Rowan had been teaching an unexpected connections course in BYU's Honors Program entitled "The Art of Transformative Storytelling." The purpose of the course is to help students develop storytelling competencies to more effectively interpret and explain their personal experiences to others. The hypothesis behind this course was that individuals with higher storytelling efficacy were more likely be transformed by their experiences because they could more effectively reflect on and interpret their experiences to themselves and others. An unexpected outcome of the course was the social connection and class culture that resulted from students collaboratively developing their personal narratives and then performing them for each other. The success of the class convinced Drs. Duerden and Rowan to spin off a separate Story Slam workshop and event series for the broader campus community. The goal of the Story Slam series is to provide more students the opportunity to become storytellers and to have their stories heard by a larger campus audience to promote an increased sense of social belonging among storytellers and listeners at BYU.

Last summer Drs. Duerden and Rowan became aware of Dr. Dewey's fNIRS research on the relationship between language acquisition and social connection. The opportunity to collect fNIRS data from Story Slam storytellers and participants led to a research collaboration that expanded to involved Dr. Hodge due to her expertise in social connection research. The team conducted a pilot study at the first Story Slam event in December 2023 and successfully collected fNIRS data from four storytellers and eight different listeners who's neural functioning was recorded while listening to four different stories. Additionally, the team collected surveys from almost 50 Story Slam participants. We will be running a second pilot round of data collection at a similar event on February 21. Based upon conversations with the company who supplies Dr. Dewey's lab with fNIRS data collection units, this is the first research of its kind; no other study has simultaneously collected fNIRS data from this many individuals at a single time. The fNIRS data from the first Story Slam is still being cleaned and analyzed, but early results suggest neural coupling accord among story listeners, and the preliminary analyses of the qualitative data indicate significant growth occurred pre-post for all measures of group and campus belonging. An IDR grant would allow the research team to extend the research agenda beyond this pilot project and help launch the Story Slam workshop and event series.

Methodology

The study will employ a mixed methods design to collect interview data from workshop facilitators, participants, and story slam participants, quantitative survey data from these same groups, and

neurological data using fNIRS devices from all groups. Since the impact of storytelling and story listening derive from subjectively perceived experiences (Duerden et al., 2015), the use of both self-report and physiological data will provide a more holistic picture of the phenomena under examination (Durkin, 2023). While fNIRS data has been used previously to examine the impact of stories on tellers and listeners (Liu et al., 2017; Ohad & Yeshurun, 2023), most of the research has collected data from individuals or dyads. Fortunately, Dr. Dewey's language learning lab at BYU currently has five fNIRS collection devices, allowing the team to simultaneously collect data from one storyteller and four listeners.

The study is designed to use the Story Slam workshop and event series as an applied learning laboratory. Longitudinal mixed-methods data will be collected from workshop facilitators and participants, and from Story Slam event participants and audience members. This will allow the research team to examine how social connection and storytelling efficacy develop over the course of the workshop and how telling and listening to stories during the Story Slam events impacts social connection in that context as well as influencing a sense of connection to the broader BYU community. The quantitative surveys will collect demographics (age, gender, ethnicity, major) and will incorporate a variety of measures of social connection and perceived experience types, including:

- Inclusion of Others in Self - Single Item Measure
 - Aron, A., Aron, E. N., & Smollan, D. (1992). Inclusion of other in the self scale and the structure of interpersonal closeness. *Journal of Personality and Social Psychology*, 63(4), 596-612.
- Sense of Social Fit Scale - 17-items
 - Walton, G. M., & Cohen, G. L. (2007). A question of belonging: race, social fit, and achievement. *Journal of Personality and Social Psychology*, 92(1), 82-96
- Experience Type Scale - 16 Items
 - Duerden, M. D., Hodge, C. J., Melton, K., Ward, P., Bagley, M., Anderson, L., ... & Widmer, M. A. (2023). Empirically testing the experience type framework. *Journal of Leisure Research*, 1-26.

Additional measures are still being identified to measure storytelling efficacy and high-quality listening among other potentially applicable variables. Quantitative surveys will be administered before the workshop series begins, after each session, before and after the Story Slam events, and four weeks after each event. Interviews will be held once with each participant and facilitator during the workshop series. fNIRS data will be collected from workshop facilitators and participants during each workshop and from storytellers and listeners during each Story Slam event.

Project Outcomes

In the short term (i.e., over the course of the study's two-year lifespan), the two primary objectives are:

1. Establish the BYU Story Slam workshop and event series that will occur in both fall and winter semesters. Students who want to develop and share their story at a Story Slam event will participate in a four-part workshop series designed and supervised by Drs. Duerden and Rowan; the workshops will be facilitated by previous Story Slam participants. Participants in the workshop series will present their stories at the end of each semester at a Story Slam event open to the campus community.
2. Collect mixed methods data (e.g., interview, survey, fNIRS) from workshop facilitators and participants as well as Story Slam participants and audience members to address the following research questions:
 - Increase understanding regarding the relationship between storytelling efficacy, story quality, and social connection.
 - Increase understanding of how telling and listening to stories builds social connections from a perceived and neurological standpoint.
 - Increase understanding of how to effectively increase storytelling efficacy.

- Increase understanding regarding how storytelling experiences influence participants sense of connection to the broader campus community.

The ability to better understand how storytelling impacts social connection would have significant research and practice impacts. Existing research supports the positive relationship between social connections and learning (Dewey et al., 2012, 2013; Immordino-Yang, 2016; Lieberman, 2012). This study aims to add to the understanding of this connection with fNIRS data that provide neurological insights into how these social connections develop and how and why they impact learning. In the case of this study, the learning will be focused on learning others' stories, but generalizable principles for other learning contexts should result. We hope to increase our understanding of how storytelling impacts social connection, especially social connections that build bridges across social, cultural, and political divides. The goal of building communities of belonging is especially relevant at a mission-driven university like BYU where promoting campus belonging is a mission aligned objective.

Additionally, the research team hopes to secure additional external funding to further support expanded fNIRS research at BYU. The long-term goal is to secure funding to purchase enough fNIRS units to be able to simultaneously collect data from larger groups of individuals (e.g., 30) and thereby conduct more complex experimental designs. This level of data would allow researchers at BYU and collaborating institutions to conduct groundbreaking research on the role of storytelling on social connection on a variety of topics including:

- The impact of storytelling and listening on individuals who hold differing political perspectives on complicated topics (e.g., gun control, welfare, immigration)
- The impact of storytelling and listening on the quality of learning that takes place in a traditional classroom.

Interdisciplinary Team

This team has been strategically organized with experts in story structure, neuroscience research, social connection research, and experience design. Competencies in these areas will allow the team to design and facilitate the storytelling workshop and event series and conduct mixed methods research on the impact of these experiences on participants. This combination of skills and expertise will facilitate robust research and lead to external funding across a variety of disciplines from humanities to neuroscience.

- Mat Duerden – Experience Design and Management – Marriott School of Business
 - Dr. Duerden will serve as the PI for the project. In addition to teach with the Art of Transformative Storytelling class with Dr. Rowan, Dr. Duerden studies the design and impact of extraordinary experiences on individuals. His experience design focused research agenda dovetails with the proposed study especially regarding understanding the role of socialization on within experiences and the nature of transformative experiences.
- Dan Dewey – Linguistics – Humanities
 - Dr. Dewey runs the fNIRS Applied Linguistics Lab in the College of Humanities. His expertise in fNIRS research and the role of social interaction in learning will play a central role in the study's design and execution.
- Jamin Rowan- English- Humanities
 - Dr. Rowan's teaching and research expertise focuses on community building and storytelling. His background as an English scholar and Alcuin Fellow position him well to aid in the design of the workshop series and in the conceptualization of storytelling efficacy and story quality.
- Camilla Hodge - Experience Design and Management – Marriott School of Business
 - Dr. Hodge is an expert in designing and studying experiences that promote social connection. She also is versed in collecting and analyzing physiological data. Dr. Hodge's expertise is in social connection and experiences that promote such connections

(Hodge et al., 2023; Melton et al., 2022); she will oversee aspects of the research specifically focused on studying social connection.

Timeline

Key Events	F 2023	W 2024	SS 2024	F 2024	W 2025	SS 2025	F 2025	W 2026
Pilot Test Story Slam Events and Data Collection (<i>Full Team</i>)	X	X						
Data Analysis of Pilot Data (<i>Full Team</i>)		X						
Design Storytelling Workshop Series (<i>Drs. Rowan and Duerden</i>)		X						
Training Facilitators/Student researchers (<i>Drs. Rowan and Duerden</i>)		X			X			X
Pilot test Storytelling Workshop Series (<i>Drs. Rowan and Duerden</i>)		X						
Implement Storytelling Workshop Series (<i>Drs. Rowan and Duerden</i>)				X	X		X	X
Host Story Slam Events (<i>Drs. Rowan and Duerden</i>)		X		X	X		X	X
Data Collection and Analysis (<i>Full Team</i>)		X	X	X	X	X	X	X
Submit proposals/articles (<i>Full Team</i>)			X	X			X	X

Budget and Budget Narrative

Year 1:

Student Salaries: \$15,000

Supplies and Equipment: \$3,000

Research Incentives: \$2,000

Total: \$20,000

Year 2:

Student Salaries: \$15,000

Supplies and Equipment: \$3,000

Research Incentives: \$2,000

Total: \$20,000

Budget narrative

We are requesting funding for eight undergraduate students from the College of Humanities and Marriott School of Business. These students will be helping with both the storytelling workshop series and data collection and analysis. They will work approximately 5-10 hours per week during fall and winter semesters. We also will use the funds to maintain the fNIRS devices. The remaining funds will be used to provide incentives to study participants.

References

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Plans for External Fundings

The interdisciplinary nature of this research project will allow us to apply for grants from a variety of disciplines including neuroscience and humanities.

Neuroscience

- Research on Biopsychosocial Factors of Social Connectedness and Isolation on Health, Wellbeing, Illness, and Recovery (R01 Basic Experimental Studies with Humans Required) - NIH
 - This funding opportunity announcement (FOA) invites research projects that seek to explain the underlying mechanisms, processes, and trajectories of social relationships and how these factors affect outcomes in human health, illness, recovery, and overall wellbeing.

Humanities

- National Humanities Center – Scholar Fellowship Program
- National Endowment for the Humanities: Collaborative Research Grant

BIOGRAPHICAL SKETCH

NAME: Mat D. Duerden

POSITION TITLE: Professor of Experience Design and Management

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE (if applicable)	Start Date MM/YYYY	Completion Date MM/YYYY	FIELD OF STUDY
Brigham Young University	BA	09/1997	12/2003	German
Brigham Young University	MS	09/2004	04/2006	Youth and Family Recreation
Texas A&M University	PhD	09/2006	05/2009	Recreation, Park and Tourism Sciences

A. Personal Statement

In my research I focus on conceptualizing and operationalizing experiences, codifying the field of experience design, and studying experiences across different contexts to identify generalizable principles of experience design. Since coming to BYU in 2012, I have published 39 peer reviewed articles, I enjoy and believe in the importance of interdisciplinary scholarship. I have worked with co-authors from multiple colleges across campus as well as seven other universities.

Undergraduate research assistants have played a central role in my scholarship efforts. I have employed 16 undergraduate research assistants since submitting my CFS packet at 28 total during my time at BYU. Five of the 13 articles I have published since submitting my CFS packet included undergraduate co-authors. In total, I have published 14 articles with undergraduate or graduate co-authors since being hired at BYU. For my research efforts I was awarded with an Alumni Research Fellowship from 2016-2021, an Alumni Distinguished Fellowship from 2021-present, and a BYU Marriott Research Excellence: Inspiring Learning Award in 2021.

I have also co-directed interdisciplinary study abroad programs twice at the BYU London Centre and taught as an Alcuin Scholar in the Honors Program with Dr. Jamin Rowan. Our class, The Art of Transformative Storytelling, provided the impetus for the interdisciplinary research project connected to this grant application.

B. Positions, Scientific Appointments and Honors

- Professor of Experience Design and Management, Brigham Young University, 2023-present
- Assistant-Associate Professor of Experience Design and Management, Brigham Young University, 2012- 2023
- Assistant Professor and Extension Specialist, Recreation, Park and Tourism Sciences, Texas A&M University, 2010-2012
- Post-Doctoral Research Associate –Recreation, Park and Tourism Sciences, Texas A&M University, 2009-2010

C. Contributions to Science

My research focuses on understanding the nature of extraordinary experiences and how to intentionally design them. The following is a list of my experience design related publications which appear across a variety of disciplinary publication outlets.

- Duerden, M. D., Hodge, C., Melton, K., Ward, Bagley, M., Kelley, L., Meredith, T., Rushton, A., Lacanienta, A., & Widmer, M. A. (Published Online, 2023). Empirically testing the experience type framework. *Journal of Leisure Research*.
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- Duerden, M. D., Witt, P. A., & Taniguchi, S. (2012). The impact of postprogram reflection on recreation program outcomes. *Journal of Park and Recreation Administration* 30(1), 36-50.
- Duerden, M. D., & Witt, P. A. (2010). The impact of socialization on youth program outcomes: A social development model perspective. *Leisure Sciences*, 32(4), 299-317.
- Duerden, M. D., & Witt, P.A. (2010). The impact of direct and indirect experiences on the development of environmental knowledge, attitudes and behavior. *Journal of Environmental Psychology*, 30(4), 379-392.

BIOGRAPHICAL SKETCH

NAME: Dan P. Dewey

POSITION TITLE: Professor of Linguistics and Chair of Department of Linguistics

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE (if applicable)	Start Date MM/YYYY	Completion Date MM/YYYY	FIELD OF STUDY
Brigham Young University	BA	09/1989	04/1993	Japanese
Brigham Young University	MA	09/1993	04/1997	Language Acquisition
Carnegie Mellon University	PhD	09/1997	05/2002	Second Language Acquisition

A. Personal Statement

I am an applied linguistics interested in the psychological, social, and neurological influences on second language acquisition. My most relevant training at Carnegie Mellon University included coursework in psychology, neuroscience, sociology, and cognition. Most of my research has focused on social interaction in informal learning settings and how that interaction affects language acquisition. I have recently begun using functional near infrared spectroscopy (fNIRS) to conduct neuro imaging of language learners and users. My fNIRS lab focuses primarily on understanding how educators can take advantage of social working memory, the default (social) neural network, and other neural mechanisms to help learners acquire a second language (L2). I have a strong history of collaborative research at BYU, publishing 36 peer-reviewed articles with 18 faculty members and 25 students across 7 departments and 4 colleges since coming to BYU mid-career in 2008 (numbers well above College of Humanities norms). In addition, I have published 4 pieces with co-authors from 4 other universities. My solo work (more common for Humanities), numbers only 2 pieces over this same period, for comparison. I am currently co-authoring fNIRS-based research articles with linguistics, neuroscientists, and educational psychologists (faculty and students) at BYU, Utah State University, Uppsala University, and University of Leuven. The fNIRS Applied Linguistics Lab currently has eight pieces of research at various stages using fNIRS data involving undergraduate students, MA students, and external collaborators.

B. Positions, Scientific Appointments and Honors

- **Linguistics Department Chair Brigham Young University, July 2021-present**
- Professor of Linguistics, Brigham Young University, August 2017-present

C. Contributions to Science

Using fNIRS data from Pastaza Kichwa speakers in the Amazon to determine that ideophones (vibrant words such as *zoom*, *bow-wow*, or *buzz* in English that mimic sounds, sensations, and emotions) evoke sensory responses in the brain.

Dewey, D., Green, J. G., Nuckolls, J., Nygaard, A., & Swenson, T. (2024). Neurological Evidence for the Multisensorial Semantics of Ideophones in Pastaza Kichwa: An fNIRS Study in the Ecuadorian Amazon. *Language & Cognition*. <https://doi.org/10.1017/langcog.2023.55>

Uncovering ways to promote second language acquisition and use by helping learners overcome language learning anxiety and communicative anxiety.

- Dewey, D. P., Belnap, R. K., & Steffen, P. (2018). Anxiety: Stress, foreign language classroom anxiety, and enjoyment during study abroad in Amman, Jordan. *Annual Review of Applied Linguistics*, 38, 140-161. <https://doi.org/10.1017/S0267190518000107>
- Phillips, M., **Dewey, D. P.**, Rogers, C., Summers, M., & McMurry, B. (2022, Eds.). *Positive Psychology in the Classroom: Lesson Plans for English Language Teachers*. EdTechBooks. <https://edtechbooks.org/PositivePsychologyintheClassroom>
- Rogers, C., **Dewey, D. P.**, McMurry, B., & Steffen, P. (2023). Teaching Positive Psychology Lessons in an Intensive English Program. *ELT Journal*, ccad052, <https://doi.org/10.1093/elt/ccad052>
- Highlighting the benefits of social interaction for second language learning abroad.
- Baker, W., Cundick, D., Evans, N., Henrichsen, L., & **Dewey, D. P.** (2012). Relationship between reported out-of-class English use and proficiency gains in English. *Applied Language Learning*, 22, 21-45. http://www.dliflc.edu/wp-content/uploads/2014/04/ALL_v_22.pdf
- Bown, J., **Dewey, D. P.**, & Belnap, R. K. (2015). Student interactions during study abroad in Jordan. In R.F. Mitchell, K. McManus, & N. T. Ventura (Eds.) *Social interaction, identity and language learning during residence abroad: EURLOSLA Monograph Series 4* (pp. 199-222). Essex, UK. http://www.eurosla.org/monographs/EM04/Bown_etal.pdf
- Dewey, D. P., Belnap, R. K., & Hilstrom, R. (2013). Social network development, language use, and language acquisition during study abroad: Arabic language learners' perspectives. *Frontiers: The Interdisciplinary Journal of Study Abroad*, 21, 84-110. <https://eric.ed.gov/?id=EJ1062013>
- Dewey, D. P., Ring, S., Gardner, D., & Belnap, R. K. (2013). Social network formation and development during study abroad in the Middle East. *System: An International Journal of Educational Technology and Applied Linguistics*, 41, 269-282. <https://doi.org/10.1016/j.system.2013.02.004>
- Kim, J., **Dewey, D. P.**, Baker Smemoe, W., Ring, S., Westover, A., & Eggett, D. (2015). L2 development during study abroad in China. *System: An International Journal of Educational Technology and Applied Linguistics*, 55, 123-133. <https://doi.org/10.1016/j.system.2015.10.005>
- Ring, S. A., Gardner, D., & **Dewey, D. P.** (2013). Social network development during study abroad in Japan. In K. Kondo- Brown, Y. Saito-Abbott, S. Satsutani, M. Tsutsui, & A. Wehmeyer (Eds.), *New perspectives on Japanese language learning, linguistics, and culture* (pp. 95–122). Honolulu: University of Hawai'i, National Foreign Language Resource Center. https://digitalcommons.csumb.edu/fac_books/1/

BIOGRAPHICAL SKETCH

NAME: Jamin Rowan

POSITION TITLE: Associate Professor of English & American Studies Program Coordinator

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE (if applicable)	Start Date MM/YYYY	Completion Date MM/YYYY	FIELD OF STUDY
Brigham Young University	BA	09/1994	04/1999	English
University of Southampton, UK	MA	09/2000	08/2001	Literature & Culture
Boston College	MA	09/1999	04/2002	English
Boston College	PhD	09/2002	04/2008	English

A. Personal Statement

I was trained as a literary and cultural studies scholar. My research interests have, for much of my career, existed at the intersection of American literature, urban studies, and the environmental humanities. I have published a monograph and several articles as the solo author at some of the top presses and journals in these fields. I have more recently begun to collaborate with scholars from other disciplines and to venture into areas of study beyond those in which I was trained: experiential learning, transformative education, and experience design. In 2023, two of the articles that I have co-written with these colleagues from fields beyond my own were published. Another article that I co-wrote with a colleague is currently under review.

My research interest in storytelling is a natural extension of my training in literary studies. I have co-taught a course on “The Art of Transformative Storytelling” with a colleague from the Department of Experience Design & Management for the past three years and co-directed a study abroad program in London with this same colleague in 2020 and 2023 in which we developed a curriculum that integrated storytelling and experience design.

B. Positions, Scientific Appointments and Honors

Positions

2022 – Present American Studies Program Coordinator, Kennedy Center, Brigham Young University
2017 – Present Associate Professor, Department of English, Brigham Young University
2010 – 2017 Assistant Professor, Department of English, Brigham Young University
2008 – 2010 Visiting Assistant Professor, Department of English, Wake Forest University

Honors

2021 – 2024 Alcuin Fellowship in Undergraduate Education, Honors Program, Brigham Young University
2020 – 2021 Humanities+ Faculty Fellowship, College of Humanities, Brigham Young University

2018 – 2021	Douglas K. Christensen Teaching & Learning Faculty Fellowship, Brigham Young University
2017 – 2018	Excellence in Scholarship Award, Department of English, Brigham Young University
2012 – 2013	American Studies Professor of the Year, Brigham Young University
2009 – 2010	Academic & Community Engagement Fellowship, Wake Forest University
2009 – 2010	Ethics, Leadership, & Civic Responsibility Grant, Wake Forest University
2008 – 2009	Rockefeller Archive Center Grant-in-Aid, Rockefeller Foundation

C. Contributions to Science

1. The following publications represent my research in the field of experiential learning and transformative education.

Duerden, M. D., & Rowan, J. (2023). Transformative learning outcomes: Shifting the learning outcome conversation from assessment to design. *International Journal of Teaching and Learning in Higher Education*, 35(1), 186-194.

McDonad, J., Balzotti, J., Franklin, M., Haws, J., & Rowan, J. (2023). “‘Are these people real?’: Designing and playtesting an alternative reality, educational simulation.” *International Journal of Designs for Learning*, 14(1), 34-42.

2. The following publications represent my research in the field of literary studies, urban studies, and environmental humanities.

Rowan, J. (2021). The hard-boiled Anthropocene and the infrastructure of extractivism. *American Literature*, 93(3), 391-416.

Rowan, J. (2017). *The sociable city: An American intellectual tradition*. University of Pennsylvania Press.

Rowan, J. (2013). Sidewalk narratives, tenement narratives: Seeing urban renewal through the settlement movement. *Journal of Urban History*, 39(3), 392-410.

Rowan, J. (2010). The New York school of urban ecology: The *New Yorker*, Rachel Carson, and Jane Jacobs. *American Literature*, 82(3), 583-610.

Rowan, J. (2008). Stephen Crane and Methodism’s realism: Translating spiritual sympathy into urban experience. *Studies in American Fiction*, 36(2), 133-154.

BIOGRAPHICAL SKETCH

NAME: Hodge, Camilla Jennifer

POSITION TITLE: Assistant Professor of Experience Design and Management

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Brigham Young University, Provo, UT	B.A.	04/2007	Communications – Print Journalism
Brigham Young University, Provo, UT	M.S.	06/2011	Youth & Family Recreation
North Carolina State University, Raleigh, NC	Ph.D.	08/2014	Parks, Recreation, & Tourism Management – Family Recreation

A. Personal Statement

My expertise in social connection through shared experiences began while studying parent-child recreation activities with Dr. Ramon Zabriskie at Brigham Young University. Additional graduate training and my work as an early-stage scholar has advanced my continued work in the area of connection and shared experiences by producing two review papers that address the state of the field of shared family leisure experiences (including a meta-analysis), and co-authorship on a new theoretical framework for understanding the ways in which shared family experiences lead to momentary and persistent individual and relational outcomes. My research has determined a need to identify the conditions under which shared experiences lead to increase social connection—including the contextual, psychological, and social physiological determinants that explain why some shared experiences increase social connection and others do not. I have training and experience in technology-assisted non-self-report passive data collection, survey research, secondary data analysis, qualitative methods, observation research, and ecological momentary assessment (EMA).

1. **Hodge, C. J.**, Zabriskie, R. B., Fellingham, G. W., Coyne, S., Lundberg, N. R., Padilla-Walker, L. M., & Day, R. D. (2012). The relationship between media in the home and family functioning in context of leisure. *Journal of Leisure Research*, 44(3), 258-307.
2. **Hodge, C. J.**, Duerden, M. D., Layland, E. K., Lacanienta, A., Goates, M. C., & Niu, X. M. (2017). The association between family leisure and family quality of life: A meta-analysis of data from parents and adolescents. *Journal of Family Theory & Review*, 9(3), 328–346.
3. Melton, K. K., **Hodge, C. J.**, & Duerden, M. D. (2020). Ecology of family experiences: Contextualizing family activities for human development and family relations. *Journal of Leisure Research*. DOI: 10.1080/00222216.2020.1802374
4. **Hodge, C. J.**, Melton, K. K., Duerden, M. D., Widmer, M., Rushton, A., & Kelley, A. (Online, 2023). An examination of the stability of the remembering self when measuring social connection derived from a shared leisure experience. *Journal of Leisure Research*. DOI: 10.1080/00222216.2023.2213261
5. Duerden, M. D., **Hodge, C. J.**, Melton, K. K., Ward, P. Bagley, M., Kelley, A., Meredith, T., & Rushton, A. (Online, 2023). Empirically testing the Experience Type Framework. *Journal of Leisure Research*. DOI:10.1080/00222216.2023.2244957

B. Positions and Honors

Positions and Employment

- 2014 – 2017 Assistant Professor, Department of Recreation, Parks, & Tourism Management, Penn State University, State College, PA
- 2017 – 2021 Assistant Professor, Department of Parks, Recreation, & Tourism, University of Utah, Salt Lake City, UT
- 2021 – Assistant Professor, Experience Design & Management, Brigham Young University, Provo, UT

C. Contribution to Science

Advancement in theorizing share family experiences. Previous theory and models specific to shared family experiences tended to focus on the activity independent of all other antecedent factors. Previous theories and models of shared activities have positioned dimensions of shared activities (social interaction and incongruity of the activity environment) as isolated from each other, inadvertently limiting the scope and translation of the research. Another limitation to previous theories and models of shared activities has been the minimal consideration of antecedent person and group characteristics that affect outcomes. Considering person and group characteristics is necessary to increase precision in translation of research results, particularly in families where divergent emotional realities have been documented. Thus, our theoretical framework—the Ecology of Family Experiences (EFE)—examines two dimensions of family activities concurrently and contextualizes them within crucial person- and family-characteristics that likely drive within- and between-family differences in the outcomes of shared activities.

- a. Melton, K., Hodge, C. J., & Duerden, M. A. (2020). Ecology of family experiences: Contextualizing family activities for human development and family relations. *Journal of Leisure Research*. DOI: 10.1080/00222216.2020.1802374
- b. Melton, K., Townsend, J. A., & Hodge, C. J. (2018). The creation of military family leisure experiences. *Journal of Family Theory & Review*, 10(3), 602–619.
2. **Advancing the state of the field.** Study design and measurement methods used in family activity research have limited the validity of reported associations between family activities and individual and family outcomes. These shortcomings limit the generalizability of family activity research, and therefore, limit the ability of families and practitioners to effectively design and use family experiences.
 - a. Melton, K. K., Hodge, C. J., Densley, K., & Hill, B. J. (In review). Measuring psychological engagement in real-time during structured experiences: Validation and reliability study using Immersion Neuroscience Software. *Journal of Leisure Research*.
 - b. Hodge, C. J., Chandler, K. D., Melton, K. K., *Hoke, K., *Blodgett, J., & Olschewski, E. (2020). Real-time, passive measurement of communication during family leisure: An exploratory study of wearable sociometric badges. *Journal of Leisure Research*.
 - c. Hodge, C. J., Duerden, M. D., Layland, E. K., Lacanienta, A., Goates, M. C., & Niu, X. M. (2017). The association between family leisure and family quality of life: A meta-analysis of data from parents and adolescents. *Journal of Family Theory & Review*, 9(3), 328–346.
 - d. Hodge, C. J., Bocarro, J. N., Henderson, K. A., Zabriskie, R. B., Parcel, T. L., & Kanters, M. (2015). Family leisure: An integrative review of research from select journals. *Journal of Leisure Research*, 47(5), 577–600.

Current and Pending Support

Current Support

- The pilot portion of this study has been funded to this point by research funds from the respective faculty members individual research accounts.
- Equipment and staff support from the fNIRS Applied Linguistics Lab in the College of Humanities at BYU.

Pending Support

- Interdisciplinary Research Grant – Brigham Young University - \$20,000 per year for two years