



SHOWCASE OF

FACULTY RESEARCH & CREATIVE ACTIVITY

OCTOBER 25, 2018

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*Although today's Spotlight on
Scholarship program is limited in time,
this booklet includes all submitted
faculty and staff abstracts describing
their research, scholarship and
creative activities that enrich NKU.*

Spotlight on Scholarship is the idea that we celebrate each other, and the truly amazing work that we are doing to make this world a little better (and in some cases a lot better). We want to enhance the image of our institution and the people who work here, to show (or rather dazzle) our community the magic that is happening at NKU. Let them burn their eyes on our greatness....

NORTHERN KENTUCKY UNIVERSITY - UNIVERSITY RESEARCH COUNCIL

Bethany Bowling

Associate Dean
College of Arts and Sciences

Brad McCombs

Visual Arts

Brian Hackett, Chair

Public History

Christian Gamm

Graduate Education

Gabriel Sanders

Kinesiology and Health

James Walden

Computer Science

John Alberti

English

Lynne Zajac

Nursing

Madhura Kulkarni

CINSAM

Mark Neikirk

Scripps Howard Center for Civic Engagement

Mary Ucci

Research, Grants and Contracts

Michael Mannheimer

Chase College of Law

Nancy Campbell

Steely Library

Robert Scoggins

Alumni Representative

Samantha Langley

Vice Provost Graduate Education, Research & Outreach

Shauna Reilly

Political Science,
Institute for Student Research & Creative Activity

Suk-hee Kim

Social Work

Tom Baxter

Allied Health

October 25, 2018

Greetings!

Welcome to Northern Kentucky University's inaugural Spotlight on Scholarship event! This event is a wonderful opportunity for faculty and staff to share their research, scholarship and creative work with each other and the community, to collectively recognize the importance and value of our contributions and for all to enjoy the company of colleagues.

We were delighted to receive over 80 submissions for this celebration. While one day of presentations limits our ability to hear about all of the wonderful work that is being conducted, this program booklet includes all abstracts that were submitted and you will see that the submissions represent all of our colleges, and work that has been presented regionally, nationally and internationally. Today's presentations feature work by 34 scholars. The work reflects our commitment to the teacher-scholar model, and the active engagement of students in the process of our scholarship efforts. The core of our academic life is guided by the pursuit of knowledge in all of its forms, and engaged teacher-scholars impact our students, our region and beyond.

At the end of the celebration I will also present the first Sol award (pronounced soul). Sol is the Norse goddess of enlightenment; she is the sun; and she is rebirth, wisdom, creation and enlightenment. It is believed that Sol was adapted by the Norse from other pagan religions throughout northern Germany and Scandinavia. It is not surprising that after long northern winters, the coming of light is a sign of spring, new beginnings, rebirth and renewed energy.

This is why we named the NKU award for outstanding research, creativity and scholarship after this Norse deity; she embodies the spirit of a new and better tomorrow. The spirit of creativity and the search for knowledge is a constant force at NKU. Like the sun it is ever present, ever burning, ever renewing, with inexhaustible energy. Irresistible strength, focused on the pursuit of the discovery and creativity; that is who she is and that is who we are.



I look forward to the Spotlight on Scholarship becoming an annual event to recognize the exceptional research and creative activities by many of our faculty and staff. I extend my congratulations on all of your scholarly achievements during the past year, and affirm my commitment to NKU's continued support of your scholarly and creative work.

Sincerely,

A handwritten signature in black ink, reading "Sue Ott Rowlands". The signature is written in a cursive, flowing style with a large initial "S".

Sue Ott Rowlands
Provost and Executive Vice President for Academic Affairs

NKU Spotlight on Scholarship
October 25, 2018
Griffin Hall Digitorium

8:30-8:45 Coffee and networking
8:45-9:00 Welcome – President Ashish Vaidya

Spotlight Speakers – GH Digitorium

9:00-9:20 Cecile Marcinski – Professor, Psychological Sciences
"How Emerging Concerns about Field Sobriety Testing May Help Us Understand the Abuse Potential of Alcohol"

9:25-9:45 Sara Drabik – Associate Professor, Electronic Media & Broadcasting
"Women in Coffee Project"

9:50-10:10 David Childs – Associate Professor, Teacher Education
"Teaching Away Hate: Challenging Racial Stereotypes In Popular Culture within Social Studies and History Classrooms"

10:15-10:35 Chris Strobel – Professor, Electronic Media & Broadcasting
Corrie Danieleley – Associate Professor, Theatre & Dance
"Making Media for Startup Businesses in the Westlake Township of Cape Town"

10:40-11:00 Jonathan Cullick – Professor, English
"He Could Talk So Good"—The Rhetoric of the Populist Demagogue (Robert Penn Warren's *All the King's Men*)

11:05-11:25 Kirsten Schwarz – Associate Professor, Biological Sciences
"Strategic Depaving in Newport's Urban Core for Community and Environment"

Short Spots – GH Digitorium

11:30-11:40 Michael Mannheimer – Professor, Chase College of Law
"Unusual Punishment: The Federal Death Penalty in Non-death-penalty States"

11:45-11:55 Joseph Mester – Associate Professor, Biological Sciences
"Development of Novel Vaccines for Hepatitis C"

12:00-12:10 Nathan De Lee – Assistant Professor, Physics, Geology & Engineering Technology
Kyle Houston – Student, Mathematics and Astronomy
"A Stellar Dance: Characterizing the Orbits of Stellar Companions"

12:10-1:00 Lunch - UC 375 (Ballroom)

12:25-12:45 Lunch speaker – Mark Wasicsko – Professor Endowed Chair, Counseling, Social Work and Leadership
"You Make Me Smile"

Short Spots – GH Digitorium

1:00-1:10 Tonya Krouse – Professor, English
"Thinking Back Through Virginia Woolf: Narrative Futures in Women's Literature and Culture"

1:15-1:25 Perilou Goddard – Professor, Psychological Sciences
"If We Believe It's A Disease, We Want To Help: Understanding Attitudes Toward Evidence-based Heroin Use Disorder Policies"

Panel Discussions

Panel 1 – 1:30-2:00 in HE 515

Creative Engagements: Finding New Ways to Recruit, Inspire, and Educate our Students

Moderator, Lynne Zajac – Associate Professor, DNP Program Director

- Maggie Whitson – Associate Professor, Biological Sciences
"Finally! The SE US Collections at NKU's John W. Thieret Herbarium Go Virtual"
- Erin Robinson – Associate Professor, Director BSN/ABSN Programs
Gannon Tagher – Associate Professor, Chair, Department of Nursing
Julie Hart – Assistant Professor, Department of Nursing
"Pathways to a Nursing Degree"
- Daryl Harris – Associate Professor, Theatre & Dance
"The SIBA Initiative": Life Skills through Theatre Skills

Panel 2 – 1:30-2:00 in GH Digitorium

Global Collaborations and Beyond

Moderator, Brad McCombs – Associate Professor, Visual Arts

- Yasue Kuwahara – Professor, Communication
"Chindonya: Vanishing Traditional Performing Art of Japan"
- Nancy Jentsch – Senior Lecturer, World Languages & Literatures
"From Kentucky to Kochel Am See and Back Again"
- Scott Nutter – Professor, Physics, Geology & Engineering Technology
"The ISS-CREAM and HELIX Projects at NKU"

Panel 3 – 2:05-2:35 in GH Digitorium

Teaching and Learning through the Lenses of the Arts and Humanities

Moderator, Suk-hee Kim – Assistant Professor, Counseling, Social Work & Leadership

- KC Russell – Professor, Chemistry
Tracey Bonner – Assistant Professor, Theatre & Dance
"Learning Organic Chemistry Mechanisms through Dance"
- Marc Leone – Associate Professor, Visual Arts
"The Drawing Database-YouTube Channel"
- Abdullah Al-bahrani – Assistant Professor, Economics & Finance
Jamie Weathers – Western Michigan University, Finance
Darshak Patel – University of Kentucky, Economics
"Racial Differences in the Returns to Financial Literacy Education"

Panel 4 – 2:05 – 2:35 in HE 515

Resiliency, African Bioethics, Cultural Identity, and Social Justice

Moderator, Brian Hackett – Associate Professor, Director of Public History

- Douglas Hume – Associate Professor, Sociology, Anthropology & Philosophy
"Social Networks, Resiliency, and Development: Expert Sugar Cane Farming Knowledge in Northern Belize"
- Augustine Yaw Frimpong-Mansoh – Professor, Sociology, Anthropology & Philosophy
"Bioethics: African Perspective"
- Eric Bates – Part-Time Faculty, Sociology, Anthropology & Philosophy
"Religious Identity among the Blackfeet Indians of Montana"
- Rachel Zlatkin – Instructor, Honors
"'Me Too': Hilary Clinton and *The Ducess of Malfi*"

Panel 5 – 2:40-3:10 in HE 515

Health and Environment Across the Lifespan

Moderator, Lynne Zajac – Associate Professor, DNP Program Director

- Chris Curran – Associate Professor, Biological Sciences
Lisa Massie - Student, Neuroscience
Yislain Villalona – Student, Clinical Research Coordinator, Cincinnati Children’s Hospital
Shelby Caudill – Student, Psychology
Jamie Weimer – Student, Ohio State University
Pamela Dickson – Student, Medical Technologist, St. Elizabeth
“Toxic Troubles for the Developing Brain”
- Katherina Nikzad-Terhune – Assistant Professor, Counseling, Social Work and Leadership
Suk-Hee Kim - Assistant Professor, Counseling, Social Work and Leadership
“Enhancing Gerontological Literacy through Education and Advocacy”
- Stacie Jankowski – Assistant Professor, Communication
“The Power of Story: How News Frames Influence the Way People Talk about Emotions”

Panel 6 – 2:40-3:10 in GH Digitorium

The Era of Fake News: Free Speech, Psychology, and Science

Moderator, James Walden – Professor, Computer Science

- Jennifer Kinsley – Professor, Chase College of Law
“Therapeutic Expression”
- Alina Campan – Associate Professor, Computer Science
Traian Marius Truta – Associate Professor, Computer Science
“Understanding Fake News Spreading In Online Social Networks”
- Alyssa Appelman – Assistant Professor, Journalism
“Analysis of the Psychological Effects of Journalistic Acronyms”

Panel 7 – 3:15-3:45 in GH Digitorium

The Challenges of Climate Change

Moderator, Brad McCombs – Associate Professor, Visual Arts

- Richard Durtsche – Professor, Biological Sciences
Larry Greenburg – Karlstad University, Karlstad, Sweden
Karl Fillipson – Karlstad University, Karlstad, Sweden
Bror Johnsson – Norwegian Institute for Nature Research, Oslo, Norway
“Metabolism in Atlantic salmon and brown trout and the likely effects of climate change”
- Anthony Chavez – Professor, Chase College of Law
“Incentivizing Negative Emission Technologies”

4:00 **Presentation of Spotlight on Scholarship “SOL” Award** in GH Digitorium

- Corbett Trio Performance
String Trio in Eb Major, Op. 3, Allegro con brio - Ludwin van Beethoven (1770-1827)
Hanna Hurwitz, *violin* – Lecturer, Music
Holly Attar, *viola* – Lecturer, Music
Amy Gillingham, *violoncello* – Associate Professor, Music
- Provost Remarks and Award Presentation - Provost, Sue Ott Rowlands
- Cocktails, Networking and Corbett Trio

**NKU
RESEARCH
SCHOLARSHIP
& CREATIVE ACTIVITY
ABSTRACTS**



DENOTES SOS PANELIST

Abdullah Al-bahrani, Economics & Finance
Jamie Weathers, Western Michigan University, Finance
Darshak Patel, University of Kentucky, Economics



Racial Differences In The Returns To Financial Literacy Education

We examine financial literacy and the returns to financial literacy education, specifically focusing on the racial financial literacy gap. We confirm evidence that whites have higher financial literacy scores relative to minorities and that financial literacy increases with participation in financial literacy education. However, we find the benefit of participation in financial literacy education is higher for whites than minorities. Thus, the impact of being white alone persists, indicating a racial financial literacy and/or behavioral difference despite financial literacy education. Our findings have implications for policymakers interested in narrowing the racial wealth gap via financial literacy education.

Financial Literacy, Financial Literacy Education, Racial Wealth Gap

“Addicted to Love: The Productive Pathology of The Romantic Comedy in the Netflix Series *Love*”

My presentation is based on an essay that I am writing for a collection on “post-romantic comedy” and is a continuation of an ongoing project analyzing changing representations and performances of gender in the contemporary romantic comedy. My focus is on the just-concluded Netflix series *Love* and how that series both demonstrates and deals with the pathological aspects of the traditional movie/TV romantic comedy, including obsession, manipulation, and coercion. Specifically, the program uses addiction, both figuratively and literally (one of the main characters battles substance abuse in the series), as a way of foregrounding these pathologies, along with challenging the idea of marriage as a “happy ending.”

In a larger sense, I look at this series as part of an ongoing, at times contradictory, but ultimately productive overturning of traditional ideas of gender performance (especially heteromascularity), sexuality, and generic expectation in the 21st century romcom. Beginning with the bromances that began appearing soon after the turn of the century, variations of the romcom have emerged that began exploring concepts—toxic masculinity and violence; gender double standards; the oppressive nature of mandatory heterosexuality and rigidly binary conceptions of gender—that have only grown more relevant in the age of #MeToo. An enduringly popular genre that foregrounds the importance of emotion, desire, and love in our lives, the romantic comedy remains among the most culturally conservative of narrative forms. At the same time, the destabilizing energies of comedy, parody, and satire complicate any easy reading of the politics of the romcom.

In *Love*, produced by the bromance auteur Judd Apatow, the pathology of the narrative romcom expresses itself through the character of Mickey (Gillian Jacobs), who understands her own life in terms of various addictions, especially drugs, alcohol, and, most pointedly, sex and relationships. The metaphor of addiction extends to the cultural as well; both Mickey and her romantic partner Gus (Paul Rust), workers in the media economy, read and fret over their own evolving relationship in terms of the scripts afforded them by popular culture, from the romcom to reality television to the self-help and recovery movements. While the third and final season of *Love* followed the generic tradition of ending with the marriage of the two main characters, the radical ambivalence expressed by *Love*’s treatment of romance as pathology shakes up both the romcom as genre and our experience as viewers of the romcom, causing us to question our own desires and investment in the genre as much as the characters do.

Gender, Genre, Cinema, Television, Comedy

James Alverson, Teacher Education
Jaesook Gilbert, Teacher Education

Evaluation Study Research And School Districts: Lessons Learned

This project is an evaluation study of the seven Northern Kentucky school districts that received the 2016-2017 Collaborative Preschool Partnership grant. The purpose of this grant was to incentivize school districts to work with their community early childhood partners in order to increase the number of children who have full-day high quality preschool program experience prior to kindergarten.

The main goal of the evaluation study was to show that awarded grant monies were being used to improve preschool programs and partnerships for the seven Northern Kentucky school district implementation grantees. The quantitative evaluation study metrics including increases in enrollment slots, increases in students being enrolled in the programs, teacher hires with associated teacher qualifications, and hopefully test scores and kindergarten readiness measures in the future were selected to show indication of increased access to preschool and improved quality of preschool.

The evaluation study, however, evolved into a mixed method evaluation in order to account for the multiple viewpoints and experiences of the stakeholders. The lessons learned consisted of several themes. One key theme is to “know the context.” The context gives the data meaning, and without an intimate knowledge and understanding of the context, the data becomes merely numbers without direction, and from which valid inferences cannot be made. We were able to gain an understanding of each individual context through our face-to-face interview with the local school districts. We worked to develop relationships with the local districts, and in doing so, communicated our data needs, while listening to them and learning about their needs. This process worked to establish a more robust set of measures than with what we began, and which we were eventually able to relay to the state. Another main theme is to learn to navigate when the context is foreign. Quantitative evaluation researchers, especially those who have not conducted qualitative research, need to become comfortable with stepping outside of their main area of training and background. By stepping outside of the comfort zone of quantitative research, the researcher allows oneself to become immersed in the stakeholders’ different situations. In doing so, the researcher becomes better informed and the evaluation methodology and practices become much more richer and is able to tell a more complete story. Researchers must avoid the pitfalls of being detached from the participants and not being well versed in the language of the research setting. Immersing oneself in the context is absolutely necessary for more valid inferences and a successful evaluation. Finally, do not be afraid to embrace other methods or frameworks if these methods and frameworks can prove to be useful tools in achieving your research ends.

Evaluation Research, Preschool Education, Research Methodology



Analysis of the Psychological Effects of Journalistic Acronyms

The journalism industry is facing an uphill battle for respect and trust. This project argues that journalistic jargon, specifically in the form of acronyms, is one contributing factor. It argues that when journalists use unfamiliar acronyms (e.g., SCOTUS, as a shortening of Supreme Court of the United States), they are alienating readers and contributing to an already-growing distrust in the profession. This project assesses the effects of acronyms in news content on reader perceptions. It was conducted as a two-part study using quantitative, social science methods.

In Study 1, a content analysis was conducted to identify commonly used acronyms in headlines in *The Cincinnati Enquirer*. The goal was to determine which words or phrases are commonly shortened. In total, 150 acronyms were found in the six-week sample. The 27 acronyms found in at least three issues of the sample were deemed to be the most popular and were used in Study 2.

In Study 2, a survey was conducted to test whether Cincinnati-area residents understood these acronyms. A total of 209 participants were shown the most common acronyms and asked to explain what the letters stood for and to give a general description of what it represented. In some cases, participants could explain even though they couldn't identify; for example, only 13 participants knew that NASCAR stood for the National Association for Stock Car Auto Racing, but 141 participants had at least some familiarity with the term. However, in all, many struggled with both identification and description. Scores were highly correlated with media use, need for cognition and time spent living in the area. Participants also answered short-answer questions about journalistic acronyms. When asked about their reaction to news outlets publishing unknown acronyms, one-third expressed negative emotions, including frustration and annoyance (e.g., "Jargon is elitist and unnecessary." // "Journalists being lazy." // "Just type the extra letter.").

Overall, this project provides empirical support for the notion that journalists' acronym use is prevalent and that it bothers readers. Theoretically, this suggests a psychological or cognitive underpinning to acronym comprehension and related perceptions. Practically, it suggests that journalists can make it their responsibility to ensure reader engagement by erring on the side of overexplaining. Focusing on reader comprehension over brevity can, in turn, help journalists as they work to regain public respect and trust.

This project was funded by a 2016 NKU Faculty Summer Fellowship, as well as start-up funding from the Department of Communication. The full manuscript was accepted and presented at the 2017 conference of the Association for Education in Journalism and Mass Communication, and industry implications were presented at the 2017 conference of ACES: The Society for Editing. A follow-up experiment will be conducted this fall to more directly test the theoretical and practical implications of readers' misunderstanding. This work could be of interest to colleagues in English, psychology and political science.

Journalism, Media Psychology, Media Trust, News Audience, Quantitative Methods



Religious Identity Among The Blackfeet Indians Of Montana

For the past ten years I have conducted fieldwork in western Montana among the Blackfeet Indians. As the co-director for the NKU Native American Studies program, the only such program in the entire Commonwealth of Kentucky and the Ohio Valley region, it has been my goal to engage in research that not only lends itself to contemporary interdisciplinary scholarship but also provides an avenue of literary expression for the Blackfeet themselves employing their own stories and histories. When I started my fieldwork experience focusing on native/religious identity on the reservation, the participants were pleased because it was a topic that received little or no attention among those interested in Blackfeet history, especially for the native Pentecostals. My doctoral research was seminal work. The Pentecostal experience, a prominent form of protestant evangelical Christianity, has had substantial effects on Blackfeet Indians thus producing unique and multifaceted identities that interrogate both Pentecostal and Indian modes of existence. Although these points of convergence may disrupt typical Native identity formation, it is my position that Blackfeet Pentecostals continue to maintain their Native identity. It seems that on the surface some Blackfeet Pentecostals have abandoned their traditional ways in exchange for a Christian/Pentecostal identity. But the Native social situation is much more complex. I will demonstrate in my talk that Blackfeet Pentecostals employ cultural signals (such as native language, oral history, traditions, music, etc.) in order to maintain the boundaries around which their Indian identity is produced. My research over the years has focused on first-hand ethnographic data (interviews, personal histories, photographs, etc.) to show the development and diffusion of Pentecostalism among the Blackfeet as it relates to their Native identity/expression.

I am currently collecting more photographs, oral histories, and other ethnographic data for an upcoming book chapter proposal. Even though I am part-time at NKU, I think on-going research is critical for my incredible students to know how to work first-hand with peoples of other cultures. American Indian populations are increasing in numbers and they represent hundreds of exciting and unique ways of life. For an NKU student to learn about Native Americans is an opportunity to explore yet another avenue of what it means to be human.

Native American Studies, Ethnic studies, Interdisciplinary studies, Blackfeet, Identity, Pentecostalism, Ethnography

Axel Brandt, Mathematics & Statistics

Mathematical Perspectives: Awful to Awe-Full

The Bureau of Labor Statistics predicts that employment opportunities will increasingly require proficiency in science, technology, engineering, and mathematics (STEM). Since mathematics is the technical foundation for the STEM fields, there is increasing value in developing mathematical skills.

According to a 2012 study, 64% of US 9th graders do not enjoy doing mathematics, and 29% report getting “very nervous” when doing mathematics problems. Further, the Department of Education reports that only 16% of American high school seniors are proficient in math and interested in a STEM career, and only half of those that major in STEM eventually choose a STEM career. Research indicates that an early and sustained interest in STEM is important for those entering these careers.

The purpose of this talk is to present various K-12 enrichment models aimed at developing interest in mathematics and STEM. In particular, we will explore engaging and entertaining mathematical activities designed to be accessible to K-12 students. Using these enrichment models, this talk intends to inspire ideas for collaborative enrichment projects and to solicit potential opportunities in the community.

Mathematics, Enrichment, STEM, Outreach

The Current State of “Voice of The Consumer” Programs: A Study of Organizational Listening Practices and Effectiveness

While there is a rich literature on the process and impact of listening in interpersonal settings, studies of organizational listening are relatively scarce. However, recent research highlights the social and commercial consequences of how effectively (or poorly) organizations listen and attempt to respond to their respective publics and external stakeholders (Macnamara, 2016).

Recognizing the potential stakes, business organizations increasingly are attempting to capture – and leverage insights drawn from – the “Voice of the Consumer.” More and more of these organizations are conducting surveys, soliciting comments and complaints, recording consumer calls, scouring social media, and gathering consumer feedback from other sources in anticipation of improved company-consumer relationships and market performance. Schmidt-Subramanian (2014) reports that nearly 60% of North American companies have implemented formalized Voice of the Consumer (VoC) programs, and that spending on VoC programs is on the rise.

While increased consumer listening and investments in VoC programs have been acknowledged, surprisingly little is known about their impact: How effective are organizations at capturing and leveraging the Voice of the Consumer? Where are companies achieving consumer listening goals and desired outcomes? Where are VoC efforts falling short of expectations and/or in need of improvement? These are important questions: Consumer consciousness, and a demand for corporate responsibility, are ever-increasing, requiring firms to pursue continually a balance between their own and consumer interests. Whether in local and global market contexts, companies must demonstrate sensitivity to this balance in all aspects of organizational conduct. Such balance is difficult to achieve unless consumer voices are effectively represented, assimilated, and addressed via organizational communication and action.

This presentation will provide an overview of an ongoing research program, involving North American companies, focusing on organizational practices and effectiveness related to capturing and leveraging the “Voice of the Consumer.” Employing an exploratory sequential method (Creswell, 2015), this research attempts to (a) identify specific characteristics and practices that can/should be used to describe VoC programs, and (b) assess the current state of VoC programs with respect to overall effectiveness, and in relation to the preceding specific characteristics and practices.

The presentation will share what has been learned thus far:

1. To develop, implement, and sustain an effective VoC program organizations must: (a) create the proper climate for consumer listening and learning through consumer-focused leadership, and through engaging organizational members (managers, employees, partners) in the listening/learning effort; and (b) build the necessary VoC infrastructure by implementing effective systems, processes and practices related to capturing the VoC, extracting and disseminating insights from it, and taking actions that are guided by and responsive to these insights.
2. Unfortunately, it appears that most organizations have not yet achieved a desired level of VoC program effectiveness, and that most are better at capturing consumer feedback than they are at analyzing, disseminating, or utilizing it to improve consumer experiences and relationships. The presentation also will summarize remaining work-in-progress. Implications for knowledge development in the fields of organizational and corporate communication, and public relations will be discussed, along with implications for practitioners, and directions for future research.

...With Certainty

Can we know anything with certainty? This is a fitting question given that certainty, or perceived certainty, is involved in much of what we do. Possessing it implies that we not only know something, but that we know it with the highest level of confidence. In a series of notes, written at the end of his life, Ludwig Wittgenstein attempted to address this question. Published posthumously as *On Certainty*, these notes take a new approach to traditional questions found in epistemology (theory of knowledge). While the ideas that emerge in this work are new and innovative, the non-linear writing style, thematic digressions, and quick transitions from one subject to another, make it challenging for student and scholar alike. Given these challenges, I believe a guidebook to Wittgenstein's *On Certainty* is warranted. I have secured a contract with Springer Press for such a book and am making progress towards its completion.

The rationale behind this guidebook is to make Wittgenstein's arguments accessible to the student and scholar. A careful examination of the work must take into account the historical context and the philosophical topics Wittgenstein hoped to resolve/dissolve. I intend to offer a close and thorough analysis of individual parts, sections, and statements found in the work.

Traditionally, epistemologists have expressed our level of assurance with some variation of the phrase, "I know with certainty that p." Wittgenstein's challenge to this long-standing view was to insist that knowledge and certainty differ not in degree, but in kind—they belong to "different categories." While knowledge is both propositional and deliberative, must be both true and demonstrably justifiable, certainty, on the other hand, consists of none of these characteristics. Certainty, says Wittgenstein, is borne out in the things we unreflectively do, not in what we reflectively say.

My book aims to benefit not only undergraduate philosophy students, but will also be a helpful resource for graduate students and scholars. A short guidebook like this, when used in conjunction with *On Certainty*, will serve to introduce students to Wittgenstein's ground-breaking ideas. Once fully analyzed and explained, the book will provide readers with a greater understanding of the value of epistemic thought and philosophical investigation.

I believe I am particularly suited to write such a book. Over the past five years, I have produced several articles in peer-reviewed journals regarding Wittgenstein's use of certainty. During this time, I also completed my first book, *Exploring Certainty: Wittgenstein and Wide Fields of Thought* (2014). In addition, I have presented papers at major Wittgenstein conferences (Austrian Ludwig Wittgenstein Society, North American Wittgenstein Society).

This project, which has already led to a contract, will likely result in publication and conference presentations, bringing greater recognition to NKU. It should also help make Wittgenstein accessible to academics outside of philosophy as well.

A fuller appreciation of Wittgenstein's project will encourage other scholars in other disciplines to examine the foundations from which certainty in their own fields emerge. My hope is that this, in turn, will lead to meaningful collaborative endeavors.

Wittgenstein, Knowledge, Certainty

Andrea Brooks, Library Informatics, Steely Library
Jane Hammons, Library Informatics, Steely Library

Perceptions of Research from the Undergraduate Point-of-View

Student research is growing at Northern Kentucky University. The 2018 Celebration of Student Research and Creativity had nearly 450 student participants, compared with approximately 250 students six years ago. Additionally, NKU's Institute for Student Research and Creative Activity was established in 2017, bringing support and opportunities to grow and enhance research and creative activity on campus. Numerous research studies point to the benefits of engaging students in rigorous, academic research projects (1, 2), but less attention has been devoted to student perceptions of research.

To learn more about what students think about research, librarians teamed up with student researchers and faculty from NKU's Burkardt Center to develop a survey for Celebration participants, which has been distributed for the past three years. Researchers evaluated the responses in an attempt to answer three main questions. First, how do students describe the purpose of research and what actions do they think constitute research? Second, are there any indications of disciplinary differences? And third, how do responses vary among students at different academic levels? Student responses were compared with conceptualizations of research presented in the ACRL's Framework for Information Literacy for Higher Education, which describes research as inquiry and professional discourse, and with the definition of research from the Council of Undergraduate Research: An inquiry or investigation conducted by an undergraduate student that makes an original intellectual or creative contribution to the discipline.

For librarians, the survey is providing insight into how students conceptualize, understand, and approach research within their fields. Initially, open-ended comments from undergraduate student researchers in 2016 revealed an understanding of research as primarily a way to expand one's personal knowledge, although other perceptions of research, such as research as a means of communication, were also present. The least prevalent understanding was a conceptualization of research as an inquiry-driven activity. The following year, an understanding of research as a means to answer questions and seek answers was even less prevalent in student responses. Currently, librarians and Burkardt researchers are digging further into the inquiry component to determine how students come into their research topics and whether this might impact a student's perception of research. Prior research has found that student perceptions of their undergraduate research experience are impacted by their ability to select a topic (3) and few students often have a deep interest in their topic prior to conducting research (4).

This presentation will provide an overview of the research findings to date, discuss the development of the survey each year, and offer practical recommendations for those who work with student researchers. Student understandings about research may tell us much about why students seek out or do not seek out research opportunities and how faculty mentors might help students develop not only research methodologies, but also develop an understanding of what it means to approach research as an emerging scholar.

References

1. Bauer, Karen W. and Joan S. Bennett. 2003. "Alumni Perceptions Used to Assess Undergraduate Research Experience." *The Journal of Higher Education* 74, no. 2 (Mar.-Apr): 210–230.
2. Seymour, Elaine, et al. 2004. "Establishing the Benefits of Research Experiences for Undergraduates in the Sciences: First Findings from a Three-Year Study." *Science Education*, 88 (4): 493-534. DOI 10.1002/sce.10131.
3. Stebner, Scott, Audrey King, and L.M. Baker. 2016. "Expectations and Experience: An Exploratory Study of Undergraduate Research Experiences as Viewed through the Experiential Learning Theory." *NACTA Journal*, 60 (4): 364-371.
4. Craney, Chris, et al. 2011. "Cross-Discipline Perceptions of the Undergraduate Research Experience." *Journal of Higher Education* 82, no. 1 (January-February): 92–113

Student Research, Information Literacy, Inquiry

Ty Brumback, Psychological Science

Wes Thompson, University of California San Diego, Dept. of Family Medicine and Public Health

Sandy Brown, UCSD, Dept. Of Psychiatry & Psychology

Susan Tapert, UCSD, Dept. Of Psychiatry

Psychosocial Dynamics Predicting Substance Use Over Two Years Of Adolescence

Purpose: Many psychosocial factors have been implicated as contributors to the onset and escalation of substance use in adolescent populations. Typically, each identified factor explains a small amount of the variance in substance use outcomes and is generalized across developmental periods. The National Consortium on Alcohol and Neurodevelopment in Adolescence (NCANDA) study provides a large, longitudinal sample with a wide range of psychosocial measures along with substance use. The current study examined behavioral, cognitive, social, and emotional competencies and their dynamic interactions that emerge across adolescence to predict substance use 1 and 2 years later.

Methods: We evaluated the role of developmental domains including family/peer dynamics (e.g., parental monitoring and deviance of peers), cognitive factors (e.g., alcohol expectancies), and personality and emotional characteristics (e.g., impulsivity and typical responses to stress) in the onset and escalation of alcohol and marijuana use across ages 12-24 (n=831; 51% female). We approached our analyses from a neurodevelopmental framework, characterizing biological differences related to sex, age, and pubertal development and the potential moderating effect they exhibit on substance use. The majority of the sample exhibited no substance use at baseline.

Data: Data from the first two years of the NCANDA project were analyzed using mixed linear models with the psychosocial and developmental factors assessed at baseline, 12 months, and 24 months predicting alcohol and marijuana use at 12 and 24 months. We leveraged the age range of the sample as well as the 2 year longitudinal data to evaluate influences of psychosocial factors on substance use across adolescence and within individuals over time.

Results: Psychosocial variables including peer substance use, parental involvement, and sensation seeking were associated with both alcohol and marijuana use occasions over the two years. Positive alcohol expectancies were associated with increases in drinking occasions and this effect was stronger in older adolescents. Endorsement of flexible cognitive style predicted less drinking among older adolescents, whereas endorsement of more deliberate decision-making was predictive of less marijuana use among younger adolescents.

Conclusions: These analyses point toward potentially sensitive developmental periods in adolescence and help characterize the dynamic interactions of multiple domains of functioning that contribute to substance use in adolescents. Better understanding of interactions between psychosocial factors and substance use outcomes is a key step toward developing targeted prevention and intervention strategies to minimize the negative effects of adolescent substance abuse.

Substance Use, Peer Influence, Parenting

Poverty and Social Justice

Purpose/Expected Outcomes: This project is, perhaps, easiest to categorize as a new course development for criminal justice; however, it is more accurately described as an integral educational experience. The course is tentatively titled, Poverty and Social Justice; it will examine poverty, its impact for individuals, and its relationship to crime and social problems through active learning and community engagement. The primary focus is on social justice, with a transdisciplinary pedagogical approach. Additionally, the course will emphasize self-reflection, which will increase awareness about poverty and related issues. A poverty simulation workshop (PSW) is included as a major component.

A larger goal with this scholarly project is to include an evaluation component for data collection about students' experiences, which can be extended into papers for presentations and publications.

Contributions: The course supports the mission and vision of the department and university by emphasizing the preparation of students for a diverse and inclusive society; increasing awareness of regional progress and economic growth; incorporating distinctive and innovative academic pedagogy; exposing students to active and reflective learning; and promoting collaboration within the community.

Impact on NKU and Greater Good: The course will increase the overall strength of our program as it focuses on an area that is not specifically emphasized in other courses; provides creative and innovative pedagogy that accentuates active learning and community engagement; and is offered at the sophomore level, which can be a less active year for students and a vital stage for retention.

Poverty is a reality for many individuals and families. However, unless you've experienced poverty, it's difficult to truly understand. The PSW will help eliminate misconceptions about poverty and promote awareness and understanding through an interactive and immersive experience, which sensitizes participants to the realities of poverty.

During the simulation, students will assume the identity of someone experiencing poverty and will work together with their "family" to live a month in poverty. Students will face the daily stresses and challenges a person in poverty faces as the simulation is designed to demonstrate the difficulty of living on an extremely narrow welfare-based budget. Ultimately, the goals are to promote poverty awareness, increase understanding, and inspire local change.

Collaboration: PSWs include materials for up to 26 families and can serve up to 80 participants (e.g., students). The simulation also needs about 20 volunteers – preferably people who have experienced poverty or have an academic understanding. The use of volunteers will provide an opportunity to collaborate with both NKU personnel and members of the larger community.

As a licensed facilitator, PSWs could be offered as a training tool for various groups or as a way to recruit potential students. For example, PSWs could be used to teach NKU personnel, other regional educators, or business leaders about the various obstacles that poor people face. Likewise, students from area middle schools, high schools, and community colleges could participate in PSWs as both a learning opportunity and as a recruitment opportunity for NKU as this would provide a sample of the innovative pedagogy students would experience.

Poverty, Social Justice, Simulation, Active Learning, Experiential Learning, Community Engagement, Transdisciplinary



Understanding Fake News Spreading in Online Social Networks

The objective of this research project is to develop a theoretical and practical framework to discover and then recognize, in real-time, the patterns of how fake news spreads in online social networks. Once fake news can be identified based on their spreading pattern, this knowledge can be used to prevent and limit their proliferation.

Our study platform of choice is Twitter, since Twitter is the largest platform with public data: tweets are usually (intended for the) public, unlike Facebook data. Hence, Twitter can be used as a vehicle in fake news spreading. In fact, Twitter was used as early as 2010 for fake news spreading, in the Special Election for the Massachusetts US Senate between Martha Coakley and Scott Brown. The spreading process consists of several well-defined steps, as described next. First, one or more websites are created that host the fake news and that look similar to reputable news outlets. Second, several anonymous Twitter accounts are created. Third, these anonymous Twitter accounts follow numerous influential users/user communities that are likely to believe the fake news posted in the websites created in the first step. Fourth, the identified influential users will be targeted via reply tweets that contain links to the fake news sites. Last, the targeted users will retweet the fake news to a larger audience.

Fortunately, Twitter can also be used as a research medium, not only as a spreading medium -- since Twitter allows free-of-charge collection of sample tweets, in real-time. To recognize which Twitter accounts are likely candidates for being fake news spreaders, one has to identify, from the real-time Twitter data, a chain of retweets leading, in reverse, to some anonymous Twitter accounts, recently created and which, in spite of being recently spawned, intensively (re-)tweet. A practical fake news detection tool would work similarly to a network intrusion detection system and would be able to raise alerts that could be next checked and acted upon by a human operator.

In the current stage of our work, we are building the data collection application and running experiments to test the statistical relevance and limitations of the data that Twitter provides free access to. The Twitter Standard Streaming programming interface provides access to only a sample of all current tweets that is less than 1% of the entire volume of tweets. However, when the sample tweets are obtained via queries with specific keyword filters, then the sample data seems to be reliable and it may contain a large percentage of all the tweets with the specific keywords -- since a lot less than 1% of all tweets contain a specific keyword, than the sample may very well contain most of the tweets on that particular topic.

Complementary to solving the computational aspects of fake news identification, this project will call for expertise from fields such as psychology, political science, journalism -- to ensure a rigorous approach to the social and psychological aspects that are part of the fake news spreading phenomenon.

Fake News, Twitter, Social Networks

Ada T. Cenkci, Political Science, Criminal Justice & Organizational Leadership
Jeff Zimmerman, Political Science, Criminal Justice & Organizational Leadership
Tuba Bircan, KU Leuven, HIVA Research Institute for Work and Society

Examining the Influence of Employee Resource Groups on Employee Engagement & Workplace Inclusion

Employee Resource Groups (ERGs), also known as “Associate Resource Groups” or “Affinity Groups,” are voluntary, company-sponsored groups organized around a common interest or identity (Welbourne, Rolf, & Schlachter, 2015). There is a significant lack of research on ERGs, including ERGs’ influence on individual employee outcomes. While there is increasing enthusiasm for ERGs from the business world, the research interest on ERGs has lagged behind. Additionally, the few present studies on ERGs usually focus on only one type of ERG (Welbourne, Rolf, & Schlachter, 2017). Thus, based on one-on-one interviews with the members of different ERGs and executives in a major U.S. retail organization, this study examines the impact of ERGs on employee engagement and workplace inclusion.

This study also discusses how the retailer employs 10 main types of ARGs at its corporate headquarters, including: Asian, African-American, the Alliance (LGBT and Allies), Cancer Awareness, Hispanic and Latinos, Young Professionals, Women’s Leadership, Veterans, and Parents ARGs. These ARGs are classified according to four main categories: ethnicity, gender, lifestyle, or life event. Members of ARGs are provided with up to three hours of paid-time per month on ARG-related activities (including meetings, philanthropic events, or other activities). Many monthly meetings serve as informal venues for each group to discuss their common interests and develop relevant plans and steps to realize these goals.

According to the U.S. Census Bureau, the minority population in the U.S. is expected to reach 56% in 2060, as opposed to 38% in 2014 (“Projections of the size”, 2015). Such predictions underline the importance of ERGs to attract and retain minority talent. The ability to stay relevant and innovative in a fast-paced, ever-changing industry needs to be supported with a workforce that mirrors the increasing diversity of the organization’s customers. As an inclusionary practice, ERGs are an important complementary step to any organization seeking the potential advantages of a diverse workforce (Shore et al., 2018, p.177). To that end, the presenters will share how ERGs have served the organization as an internal community for employees to come together, ultimately providing the foundation to hire, retain, and develop diverse employees. In summary, this study highlights how a major US retailer utilizes ERGs to influence employee engagement and workplace inclusion.

Organizations (including NKU) can benefit from the results of this study in their efforts to create work environments that stimulate inclusiveness and diversity, and eventually, increased levels of employee engagement.

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Inclusiveness, Employee Resources Groups, Work Engagement



Incentivizing Negative Emission Technologies

Policies that successfully stimulated the growth of renewable energy can similarly incentivize the development and installation of methods to remove carbon dioxide from the atmosphere, known as negative emissions technologies (NETs).

Utilization of NETs will be critical to returning the earth's climate to its preindustrial state. Perhaps more importantly, most analyses now project that global warming will exceed 2°C. This is the level scientists project as being the threshold to avoid dangerous climate change. At this level, for instance, most glaciers will have melted, the Arctic will be ice free during the summer, and sea level rise will jeopardize many coastal cities. Nevertheless, we are currently on track to cause planetary warming closer to 3°C than to 2°C.

To avoid such warming, reducing our greenhouse gas emissions will no longer suffice – we will need to remove from the atmosphere carbon already emitted. However, NETs are woefully underdeveloped. Furthermore, questions abound regarding their feasibility, viability at scale, and costs, among other concerns.

Policies that accelerated the development of renewable energy – renewable portfolio standards (RPS) and feed-in tariffs (FITs) – can similarly incentivize and promote the development of NETs. National, state and local governments have used RPSs to require utilities to generate a set percentage of electricity from renewable sources. Most American states and many Asian nations have relied primarily upon RPSs to foster their renewable energy industries. For instance, experts credit up to 60% of the growth of renewables in the United States to the use of RPSs.

FITs, on the other hand, set a price for renewable energy provision that guarantees a profit. FITs set this price for an extended period of time, typically ranging from one to two decades. By assuring the long-term profitability of new technologies, FITs encouraged substantial new investment into renewable energy. Indeed, analysts attribute approximately half of the installation of solar and wind power worldwide to FITs.

In similar fashion, RPSs and FITs can stimulate development of NETs. Nations can craft these policies to promote particular NETs that fit their economies, their resources, and/or industries they seek to develop. Tailorable policies enable these national or state “laboratories of democracy” to experiment with different regulatory approaches, complementing the uniqueness of NETs. Furthermore, while jurisdictions typically have adopted either an RPS or a FIT to develop renewable energy, research concerning their long-term implementation suggests that a more effective approach for NETs would blend aspects of both RPSs and FITs.



Teaching Away Hate: Challenging Racial Stereotypes in Popular Culture within Social Studies and History Classrooms

With the end of the Civil Rights era and moving into the early twentieth century many people in the United States began to talk about a post racial society (Dawson & Bobo, 2009). However, there seemed to still be deep seated prejudice in society that has emerged in recent elections. Fueled by extreme rightist political discourse the US is divided along ideological lines rooted in struggles around race, class and gender. With the rise of neo-nazi and White supremacist hate groups that are targeting racial minorities with discrimination and violence, it behooves schools and universities to develop curricula and strategies to challenge this dangerous ideology (Southern Poverty Law Center, 2017).

Perceptions and ideas in the US surrounding race and identity have stemmed from social constructs that have been shaped by various popular cultural artifacts, including racist cartoons and television shows that exploit racial stereotypes. These artifacts can be linked to racist historical discourses in the US that have their roots as far back as the seventeenth century. This ideology stems from laws that restricted African Americans from everyday activities such as assembling in small groups, getting married, testifying against a white man in a court of law or getting a formal education (Lemons, 1977; Balkaran, 1991; Franklin & Higginbotham, 2009; Smedley & Smedley, 2005; Ruffner-Caesar, 2012). These laws were known as black codes that would later manifest as Jim Crow laws in the twentieth century (Childs, 2013).

The article explores how history and social science educators at high schools and universities can develop curricula rooted in a cultural studies theoretical framework that helps students understand how negative ideas about people of color are often socially constructed through media and popular culture. Racial stereotypes impact society in general and youth in particular, influencing their actions and behaviors (Johnson 1987; Du Gay, Hall, Janes, Koed Madsen, Mackay & Negus, 2013). Schools and university classrooms can be spaces that cultivate learning that challenges ugly stereotypes and discrimination, leading youth to embrace inclusive excellence in their worldview. Such a curriculum will help young people fully embrace others from various cultures and backgrounds and help minorities have a more positive image of themselves. This can be done by creating lessons that help students engage readings and media that will lead them to grow and become more socially justice minded.

With the push for inclusive excellence, faculty at NKU and other educational spaces can use popular media such as television, movies, music videos, advertisements, social media, cartoons and video games to teach history and social studies lessons surrounding racial identity and stereotypes. In this way, high school and university classrooms can be spaces that facilitate discussions about negative constructs of race, and how to combat false notions of race and ethnicity. These resources can help facilitate a critical discourse that will assist in developing more inclusive classrooms and ultimately a more inclusive society (Childs, 2014). The goal is to help students become critically aware of popular stereotypes that affect them and society and how to challenge and overcome them.

Ethnic Studies, Black Studies, Inclusive Excellence, Urban Education, Challenging Stereotypes, Social Justice, Popular Culture, Cultural Studies, African American History, Black Codes, White Supremacy, Media Literacy, Media Studies, Youth Culture, Teacher

Kimberly Clayton-Code, Teacher Education
Sara Runge, Teacher Education

Shining the Light on Community Partnerships to Develop K-12 College and Career Readiness

Are you interested in developing meaningful and lasting cross-sector partnerships that support NKU university initiatives, student learning, and positive student attitudes towards college and career-readiness?

In this interactive session, the presenters will share proven strategies for developing long-lasting multi-stakeholder partnerships between educational institutions, businesses, and community agencies to foster student interest and positive attitudes towards college and career-readiness. Through cross-sector collaborations such as the DreamFest Conference, AP Boot Camp, Camp Innovation, and Young Women LEAD, K-12 students are provided with holistic opportunities to explore diverse careers, skills, tools, and content. These collaborations also allow for NKU preservice teachers and graduate teacher education students to actively participate in the partnerships as presenters, organizers, and volunteers.

These types of partnerships and collaborative leadership opportunities are crucial to fostering a culture of college and career-readiness particularly in communities with historically lower college going, college completion, and educational attainment rates. Higher rates of educational attainment are closely tied to economic development and opportunity making it imperative for community stakeholders to collaborate and promote college and career readiness while providing access to a high-quality educational opportunity that prepares students to be ready for post-high school and postsecondary opportunities and success.

With these on-going partnerships, the presenters would like to share progress to date and invite others across the university to actively collaborate in further developing these partnerships in our community for the benefit of the K-12 community and our region.

College and Career Readiness, Community Partnerships, K-12 Education, 21st Century Skills

Eleven Elements of (Sports) Rivalry

Rivalry is both ubiquitous and unique in that rivalry is a phenomenon that crosses geographic borders and many research disciplines, yet each rivalry can be exceptional in its concoction and consequences. The purpose of this research agenda is to explicate the most common ingredients to fans' perception of rivalry in sports. Furthermore, we investigate how different ingredients contribute to anti-social reactions to rivals, such as fans' prejudice, schadenfreude (i.e., joy in others' misfortune), and discrimination in relationships. To achieve this purpose, our research entails interviews with fans across diverse sports and a survey of 9,703 fans in five major professional sports and college football. Thus far, the results have contributed to the disciplines of marketing, event management, and sports business by identifying 11 distinct but related elements that manifest in sports rivalries. While marketers can use the understanding of these elements to enhance demand (i.e., attendance or broadcast ratings) for rivalry competitions, event managers and team executives may consider moderating promotion of rivalry elements linked to anti-social behaviors and establishing adequate security protocol for competitions where such elements are highly salient. Furthermore, this research responds to needs in broader society by providing an empirically-based framework from which to study and understand animosity between opposing groups.

Accordingly, social identity theory (SIT) provides the theoretical foundation for our research in sports rivalry. While we consider SIT as related to individuals' tendency to link their self-identity to sports teams and define a rival as the outgroup that poses an acute threat to the in-group's positive esteem, this application of SIT and the related characterization of rivalry could apply to many other disciplines, such as politics, religion, nationality, brand communities, and ethnicities. Likewise, the 11 elements of rivalry uncovered in our research in sports have the propensity to apply in many other domains. Conversely, collaboration on the rivalry phenomenon beyond sports could illuminate additional elements not specified in our work to date.

The 11 elements revealed in sports are delineated into three dimensions: Conflict (including frequency of play, defining moments, star power, recent and historical parity), Peer (including competition for personnel, geography, and cultural similarity), and Bias (including relative dominance, cultural difference and unfairness). Although frequency of play, defining moments, and recent parity are listed by fans as most important to their conceptions of rivalry, cultural difference and unfairness are the most likely elements to precipitate anti-social reactions of schadenfreude toward rivals and discrimination in relationships with rival fans. Consequently, sports team, league, and event administrators must use caution when promoting competitions where cultural difference or unfairness are particularly salient, and marketers would be prudent to focus on the frequency of competitions and their defining moments, as well as the parity between opponents when crafting advertising materials.

Rivalry, Competition, Sports, Discrimination, Schadenfreude, Social Identity



“He Could Talk So Good”—The Rhetoric of the Populist Demagogue (Robert Penn Warren’s *All the King’s Men*)

Robert Penn Warren is one of the best-known and most consequential Kentucky writers of the twentieth century. *All the King’s Men*, considered one of the finest American political novels, became a bestseller, Pulitzer Prize winner, and Academy Award–winning movie. Depicting the rise and fall of an authoritarian politician—modeled on Louisiana Governor Huey Long—the novel raises questions about political ethics and rhetoric.

The Kentucky Humanities Council has selected *All the King’s Men* for Kentucky Reads 2018—a program to introduce Kentucky authors to schools, libraries, and communities. The University Press of Kentucky invited me to write the companion book for this initiative. The outcome is this summer’s publication of *Robert Penn Warren’s All the King’s Men: A Reader’s Companion*.

My book addresses this question: Seventy years after its publication, given our nation’s current political climate, what can the people of Kentucky and the U.S. learn from the novel *All the King’s Men*? I survey political references to *All the King’s Men* in newspapers and magazines. I examine books and films that the novel has inspired, such as *All the President’s Men* and *Primary Colors*. Then, significantly, I analyze the rhetoric of the novel’s political speeches and photo-ops to expose the rhetorical strategies that demagogues employ to seduce their audiences.

This application of *All the King’s Men* to the contemporary political scene contributes a new element in scholarship. Past research has examined the novel’s critiques of 1930’s-1940’s era authoritarians. My book considers the present.

Most significantly, my project offers a unique feature entirely new in Warren scholarship: the inclusion of perspectives outside academia. I asked Kentucky politicians, judges, university presidents, and political reporters how they think *All the King’s Men* is relevant in today’s political environment. Thus, my book includes quotations from former governor Steve Beshear, Kentucky Supreme Court Justice Bill Cunningham, Kentucky Court of Appeals Judge Sara Combs, the presidents of four Kentucky universities (NKU, WKU, ECU, KSU), and five political reporters from the Lexington Herald-Leader and Louisville Courier-Journal.

My project thus demonstrates the potential of inviting the community to collaborate in humanities research. My project also demonstrates the potential of collaborating throughout the university. I received assistance from the Dean of Arts and Sciences; the Office of Government, Corporate, and Foundation Engagement; W. Frank Stealy Library; the Scripps Howard Center for Civic Engagement; and the Office of Research, Grants and Contracts.

This summer and fall, my project will contribute to the community in numerous events sponsored by the Kentucky Humanities Council. For the full lineup of events, please visit <https://www.kyhumanities.org/kentuckyreads.html>.

For more about the book, please visit http://kentuckypress.com/live/title_detail.php?titleid=5558#.Wwaue6kh36A

Robert Penn Warren, *All the King’s Men*, Kentucky Writers, Political Fiction, Political Speeches, Political Rhetoric, Populism, Demagoguery

Chris Curran, Biological Sciences
Lisa Massie, Biological Sciences
Yislain Villalona, NKU Undergraduate Alumnus, Biological Sciences
Shelby Caudill, NKU Undergraduate Alumnus, Psychology
Jamie Weimer, NKU Undergraduate Alumnus, Biological Sciences
Pamela Dickson, NKU Undergraduate Alumnus, Biological Sciences



Toxic Troubles for the Developing Brain

The human brain takes more than two decades to complete growth and development, which leaves it uniquely vulnerable to environmental influences that disrupt normal development. Work in the Curran lab is focused on common and widespread environmental exposures that can permanently impair normal brain function. “Environment” is broadly interpreted to include not only pollutants, but all external factors such as diet, stress, and lifestyle. We use a mouse model to identify genes that make individuals more susceptible or resistant to widespread pollutants. We are also working to understand how exposure to those pollutants during pregnancy and breast-feeding change gene expression during brain development. Genes are the instructions for proteins, so any change in the gene or gene expression can change how the brain is built and organized.

We have studied polychlorinated biphenyls (PCBs) which are found in high level in seafood and fish from Kentucky’s rivers and lakes as well as polycyclic aromatic hydrocarbons (PAHs) which are found in traffic-related air pollution (TRAP), cigarettes, and grilled food. This means there are three major ways that people living in Northern Kentucky can be exposed to these chemicals. Over the last several years, we have collaborated with researchers at Cincinnati Children’s Hospital Medical Center to take high-resolution images of brain regions required for normal movement and coordination in mice exposed to PCBs during prenatal and early postnatal life. We identified an unusual defect in the cerebellum and differences in gene expression at several time points. This means we are closer to understanding how PCBs affect the brain and identifying the critical developmental windows when PCB exposure is most dangerous. We are also interested in finding ways to prevent or mitigate damage from these pollutants, and we have evidence that regular exercise can even help the mice with the most susceptible genotype.

We are interested in PAHs, because recent human studies found lower IQs and behavioral problems in children exposed to high levels when their mothers were pregnant. Using our mouse model, we have been able to show that genetic differences in the mice affect their susceptibility to PAH exposure. Interestingly, we found differences in motor coordination in these mice as well. We also collaborated with Dr. Cecile Marczynski in Psychological Science to examine the effect of high taurine consumption on the teenage brain. Taurine is often sold as a nutritional supplement and is found in high concentrations in energy drinks. We learned that the adolescent brain is vulnerable to high levels of taurine. Male mice were less social, and female mice drank more alcohol. In addition, there were also changes in learning and memory. This line of research has important applications for human health.

Beyond the lab, students and faculty are active in the community conducting toxicology outreach at schools, summer science camps and community centers. The goal is to educate the community on how to best protect themselves and their brains.

Neurotoxicology, Neuroscience, Taurine, Pollutants, Brain Development, Pregnancy

Emergence: Developing Worldview in the Environmental Humanities

Teachers and students alike recognize the need for proactive change for environmental health and wellbeing. My research, *Emergence: Developing Worldview in the Environmental Humanities*, offers a fresh look at how educators can empower students to be agents of change in an increasingly stressed world, highlighting connections between an environmental humanities curriculum and the emergence of student voices. Combining emergent student voices with narrative research, my ethnography develops a map for educators to support students in their cognitive journey toward greater understanding of the human-environment relationship, its cultural nexus, and the importance of worldview.

My research shows the potential of the environmental humanities to offer students a transdisciplinary view of what it means to be a planetary citizen. This project impacts our community by raising awareness of the human-environment relationship and contributes to greater understanding of socio-environmental problems. It also highlights NKU's potential for leadership in sustainability education. The contributions from the environmental humanities may inspire many of us at NKU to work collaboratively toward greater understanding of how worldview impacts the human-environment relationship and roots of socio-environmental problems. Through pedagogy, curriculum, lived experience, and resources we have much to offer one another in the service of educating for planetary citizenship.

This research may be of interest to scholars in the environmental humanities, social sciences, integrative studies, ecocomposition, environmental rhetoric and communications, critical education theory, cultural studies, critical posthumanities, and ecocriticism.

Environmental Humanities, Social Sciences, Integrative Studies, Ecocomposition, Environmental Rhetoric and Communications, Critical Education Theory, Cultural Studies, Critical Posthumanities

Nathan De Lee, Physics, Geology and Engineering Technology
Kyle Houston, Physics, Geology, and Engineering Technology
Nicholas Troup, Salisbury University, Physics
Kevin Covey, Western Washington University, Physics and Astronomy
Joleen Carlberg, Space Telescope Science Institute
Keivan Stassun, Vanderbilt University, Physics and Astronomy



A Stellar Dance: Characterizing the Orbits of Stellar Companions

Our sun is a single star that roams through the heavens alone, but this is not true for many stars. Instead they travel through space with another star (called a binary star system), or in the case of our nearest stellar neighbor, Proxima Centauri, it is part of a triple star system. These stars spin around each other in a dance choreographed by Kepler's Orbital Laws. Even single star systems like our sun, are not truly alone, since they have planets moving around them in a much smaller dance. The purpose of my current research is to figure out the particulars of each of these orbital dances. For example: How long takes for them to complete one cycle and how far away are each of the dancers from each other?

We are using data from the Sloan Digital Sky Survey (SDSS) APO Galactic Evolution Experiment (APOGEE-1), which took 8 or more observations of 14,840 stars to measure these dances. These observations allow us to measure the motion of the stars or planets. By cataloging the different types of stellar dances, we can begin to answer basic questions about how the stars and the planets formed. In particular, there is a quite rare type of dancer that is neither a star nor a planet, but something with a mass in between those two categories called a brown dwarf. These brown dwarfs may hold the key to understanding the limits of how stars and planets form in different stellar systems.

In this talk, I will discuss the APOGEE sample of stars, how we determine the orbits of each of these celestial dancers by fitting Keplerian orbits to them, and how this fits into the larger context of stellar companion formation. Stellar companions are any object that goes around a star including planets, brown dwarfs, or other stars. Testing stellar and planetary formation models with this data will ultimately shed light on how our solar system formed, and the formation of other solar systems in the rest of the Milky Way galaxy.

Stars, Planets, Brown Dwarfs, Star Formation, APOGEE, Orbits, Sloan Digital Sky Survey



Women in Coffee Project

The *Women in Coffee* project (working title) is a documentary film and qualitative research study that looks at the changing role of women in the international coffee industry. Begun in 2013 in Guatemala, this project started as a look at the International Women's Coffee Alliance (IWCA) and their work to help women have more agency in their industry, improve their communities, and ultimately, improve our morning cup of coffee. It has grown to include the effects of changing climates, the volatility of pricing, and unsustainable environmental practices that are all threatening coffee and the women and communities that depend on it. The research has been conducted in five different countries and includes individuals from over fifteen different nations. The goal is to bring attention to the efforts of individuals and organizations who are working to turn the world's second largest commodity into a way to transform communities and the lives of women and girls globally. Also, coffee as an agricultural product like so many, is in serious trouble due to the effects of climate change. It is hoped that this film not only informs but helps change viewer's consumption practices and considerations in purchasing coffee.

I have shared my experiences during this project at numerous international conferences including the Broadcast Education Association and the University Film and Video Association, and the work has led to a successful partnership in Guatemala for our study abroad program. I have taken two groups of students to Guatemala for documentary-based courses and have involved other programs such as World Languages in the process. This presentation will hopefully inspire other departments, such as environmental science, biology, global supply chain management, etc., to also get involved with these issues and communities. I hope to continue contributing to my field academically through further conference and festival presentations once post-production (film editing) is complete and that the resulting film can contribute to the field of documentary. In addition, while it isn't my "field" exactly, there is very little research on women in the coffee industry (though they historically perform an average of 70% of the work). The qualitative interviews and observational footage can be used by other organizations such as the International Trade Center for further analysis. The work has already been used by the Saïd Business School at Oxford University during their 2013 Power Shift Forum on Women Entrepreneurs and was featured on National Public Radio as part of their annual coffee week coverage.

In a culture where the rights and opportunities for women are at the forefront and we have all become more concerned about climate change and where our food is sourced, I believe this project will be of use to a variety of audiences. It is slated for completion in September 2018.

Documentary Film, Qualitative Research, Women's Studies, Environmental Studies

Richard Durtsche, Biological Sciences

Larry Greenburg, Karlstad University, River Ecology and Management Research Group

Karl Fillipson, Karlstad University, River Ecology and Management Research Group

Bror Johnsson, Norwegian Institute for Nature Research, Department of Landscape Ecology



Metabolism in Atlantic salmon and brown trout and the likely effects of climate change

One of the potential threats to fish and freshwater aquatic ecosystems, especially in northern temperate climates, is global climate change. The expected climate change in northern latitudes, particularly in the Atlantic, are for warmer winters with less snowfall, more rain, and a decrease in ice-cover periods. Besides a potential increase in water temperatures change, dissolved oxygen levels are predicted to decrease (due to lower solubility of oxygen in warmer waters) possibly to hypoxic conditions which could be lethal to the fish or at least alter fish physiology, habitat use, and distribution patterns.

A recent study found the response to short term hypoxic conditions in rainbow trout was decreased digestion which could lead to negative effects on growth. While this study measured the acute responses of fish to changing oxygen conditions, there have not been long terms studies of metabolism in salmonid fish growing at different temperatures.

In our study, we investigate the metabolic responses of young-of-the-year Salmonid fish (Atlantic salmon, *Salmo salar*, and brown trout, *Salmo trutta*) from a series of reproductive crosses that have been raised at different temperatures from spawning. In the brown trout, these crosses test the differences between fish that remain resident or migrate to sea (anadromous) during their lifetime. The goal is to see if fish raised at different temperatures show any epigenetic (genes triggered at different temperatures) responses demonstrating adaptability to these different temperatures. Once the crosses were made, the eggs were cultivate at different temperature until they are small free swimming fish (fry to parr). A temperature difference of 3°C was used during incubation of the eggs to reflect cold (natural) conditions and warm (predicted) conditions in approximately 50 years. Once hatched, the fish were maintained in a natural water temperature regime. To determine metabolic rate in these salmonids, we used a non-invasive closed-circuit static flow respirometry system where the fish is allowed to freely swim is not required to swim to hold position in the respirometer. The respirometers are then held within a large water bath where metabolic capacities of the fish were tested at natural temperatures (brown trout) and altered temperatures (7°C, 13°C, and 18°C - Atlantic salmon) the fish might experience during their lifetime. Metabolic oxygen consumption as a measure of metabolic rate was measured during experimentation with a recently developed fiber-optic oxygen sensor system (Pyroscience). This system uses infra-red optics and a spot sensor located inside each metabolic chamber to determine dissolved oxygen content in the chamber water without depleting oxygen levels. Fish were individually tested in independent swimming/respirometry chambers, each with their own optical dissolved oxygen (DO) probe. Chambers were flushed to replenish chamber water with fresh oxygenated water once oxygen levels have been depleted to a set level (automated). This allowed for simultaneous replicate samples of fish raised at different temperatures. Atlantic salmon of 1.5 years had significantly different metabolic rates at different test temperatures, but were not different based on egg cultivation temperature. 3 month old brown trout testing is on-going, and the results are pending.

Salmon, Brown Trout, Respiration, Climate Change

Phase Transitions in Black Holes

When a massive star exhausts their nuclear energy, it will collapse to a black hole. A black hole has a surface called the horizon: this surface will prevent even light escaping from the black hole. The total mass of the black hole is confined to a singularity at the center of it, which is covered by the horizon. In my research, I have studied various properties of black holes. In this presentation I discuss how black holes can undergo a phase transition similar to gas-liquid phase transition. The transition occurs between small and large black holes and only certain type of black holes demonstrate this property. I have studied details of this process and have shown that the particular black hole solutions I have chosen actually do undergo phase transitions as described as above.

Black holes exist in our universe. Hence it is of utmost importance to understand its theoretical aspects for us to have a better understanding of the universe. There are experimental aspects studied but it is also important for us to have an understanding of the theoretical aspects of black holes to plan what type of experiments to perform.

This work was published in *Physical Review D* (PRD), a leading journal in elementary particle physics, field theory, gravitation, and cosmology and is one of the top-cited journals in high-energy physics. It is important for faculty at NKU to be publishing work in well-known journals. Because of large number of papers I have published in journals on black holes, I am well known in research groups who work in black holes. I have international collaborators who have published work with me. This particular work is fascinating and will pave the way for me to connect with future collaborators.

Black Holes, Universe, Phase Transitions

Joan Ferrante, Sociology, Anthropology and Philosophy
Daryl Harris, Theatre and Dance Program
Lynnissa Hillman, Sociology
Renee McCafferty, Dance
Kelly Moffett, Creative Writing

Breakout: The Adventures of a Sociologist Gone Transdisciplinary

The presentation offers an overview of the Mourning the Creation of Racial Categories (MCRC) Project, a transdisciplinary collaboration with the mission of challenging centuries-old assumptions that people in the U.S. hold about race. The MCRC project (founded in 2016 and coordinated by a sociologist) has involved 80+ faculty and students across 15+ disciplines, primarily in the performing and creative arts. The results of this collaboration are preserved in the documentary film, *Mourning the Creation of Racial Categories, Part 1 The Categories Black and White*. A second documentary, *Hear Our Loss*, is in the final stages of production. Two other documentaries that explore the other categories including Native American, Alaskan Natives, and Asian are planned.

In the U.S. race is treated as something categorical; it is assumed that humanity can be divided into distinct categories. Moreover race is assumed to be an innate (inborn) quality that reveals itself at birth. In the context of U.S. history, this mindset can be traced to colonial Virginia and has remained in place. Specifically, the laws mandating racial division have always shown no regard for family ties. In other words, the act of dividing people into a handful of officially recognized racial categories is not simply a matter of selecting a category from a check-box list; it has required family and ancestral ties be severed. The U.S. has yet to acknowledge the associated losses, separations and abandonments. The MCRC Project demonstrates ways the countless severings, out of which racialized categories were created, can be mourned.

The presentation includes words from four collaborators and highlights from the documentaries to demonstrate how MCRC puts to rest seemingly innocuous assumptions that race is categorical and innate. The collaborations give voice to families divided over centuries and to the unacknowledged traumas upon which categories were forged and sustained. While MCRC pays homage to no discipline-specific knowledge paradigm, it enriches sociology and other participating disciplines: most disciplines now agree that race is a social construction and has no basis in biology. Yet, no discipline has made a compelling enough case to reach the general public so as to overthrow old assumptions. The MCRC project has made a case that resonates with diverse audiences.

Audience members who have viewed the documentary and other associated works (e.g., NKU Board of Regents, National Underground Freedom Center, Dance 17, Dance 18; Indian Hill and McNicholas High School students, Newport History Museum in the once segregated Southgate Street School, etc.) report seeing/hearing something very unexpected and expressing desires to know more about a previously dreaded and avoided topic. Because the MCRC Project believes that changing foundational assumptions changes reality, these initial reactions are encouraging. The categorical-innate assumptions place emphasis on unbridgeable differences which foster self-consciousness, trepidation and irreconcilable differences. The social construction assumption puts the focus on a shared American experience of being classified into unequal categories. That focus evokes empathy and mournfulness—emotions that mentally prepare us to have the kinds of conversation that so many in the United States have been waiting for.

Transdisciplinary, Race, Knowledge Paradigms, Dominant Assumptions, Social Change

Foreign Language Acquisition, Student Philanthropy, and Digital Environments

Innovative adaptations of service-learning and digital methodologies into course curricula have been accelerating globally and across disciplines in recent years. Yet, student philanthropy, a form of service-learning pedagogy, and digital approaches to second language (L2) acquisition are often considered respectively.

The presentation discusses how the foreign language classroom can serve effectively as a bridge connecting artificial and authentic environments. Students in an upper level foreign language course expanded upon their L2 skills through linguistic immersion in an online game. While connecting to the European server of the game, students played with native speakers of their L2 and kept weekly reflective journals in the target language. To correlate the abstract digital world of the game with reality, the course participated in the Mayerson Student Philanthropy Project (MSPP).

The students identified three social issues depicted in the digital game environment, researched these topics in context of their own as well as the European community of their L2, and selected and visited local nonprofits that address these social issues. The students advocated for their nonprofits in class with presentations in their L2 and through a voting process selected one nonprofit to support. Via *Impact*, the university's crowd funding website, the course raised funds, that were matched by the MSPP donor. In line with service-learning practices and L2 acquisition standards, emphasis was placed on reflective pedagogy, and the class welcomed one NKU and one UC researcher to discuss game studies further. The presentation offers student feedback and qualitative samples in form of observations, essays, journal entries, as well as pre and post surveys.

L2 Acquisition, Service-learning, Digital Engagements

Utilization of Video for Competency Evaluation

In the current era of high-stakes testing, learners must be able to demonstrate competency to be successful. Learner self-assessment is an important feature of competency testing as it enhances retention of information and establishes learner accountability for their education. Educators are tasked with finding innovative ways to promote learner self-assessment. The use of video for competency evaluation promotes self-assessment and enhances the the learning experience. Learners can watch and critique their own performance, therefore limiting bias between learner and educator.

Video, Competency, Self-Assessment

Steven Finke, Visual Arts

Sculpture of Impermanence

For the past twenty years the subject of my artwork has been impermanence. While the initial impetus was mortality and the loss of self, my research has led me to consider impermanence as applied to all creatures, groups, systems and places.

My intent as a sculptor is to create a context for reflection on mortality and impermanence, or change and instability. This is based on the conviction that the consideration of these conditions is vital if we are to live in a sustainable way with our environment and each other.

My method has been the creation of objects and environmental installations that provide a setting for reflection on these subjects. I make objects out of wood, metals, stone, glass and site them in the forest. The forest is more than a location. It is a living component of the artwork. The ecosystem by its nature provides an eloquent example of change and impermanence without judgment.

The core of this work is a site-specific artwork, located in a watershed forest in the Ohio River Valley that integrates art, human and forest in an aesthetic meditation on mortality. It is intended for a solitary viewer and provides an immersive experience that can be shaped by each individual's intent.

If selected to share this work at the Spotlight on Scholarship event, my presentation would be in the form of a visual tour of the sculptures and installations created as part of this ongoing project. This would be accomplished through digital projection, which is easily accommodated in the Digitorium. If you wish to see examples of my artwork you can visit my website at www.StevenFinke.com. The forest installation is under the "Cessation of Breath" gallery. Thank you for your consideration.

Art, Sculpture, Mortality, Forest, Impermanence, Aesthetic Reflection



Bioethics: African Perspective

I received a project grant in the fall, 2017 to support a Sabbatical Leave to collaborate with a faculty in Africa to co-organize a conference on “African Bioethics” at the University of Ghana, Accra. The conference received a sponsorship from the United Nations Educational, Scientific and Cultural Organization (UNESCO). The conference was overwhelmingly successful. It was a multidisciplinary approach, with eight papers presented by distinguished scholars from six academic disciplines (philosophy, religious studies, psychology, social work, and medicine). The presenters were from four different countries: the United States of America, Ghana, Cameroon, and South Africa. An estimate of about 200 people attended, consisting of students, journalists, faculty, university administrators, and health care interest groups (e.g. psychiatrists, traditional healers). The conference on bioethics was the first of its kind in Ghana, and it generated a great interest and publicity from the media (newspapers and television stations). We have obtained a book contract with Vernon Press to publish papers from the conference.

The African bioethics project contributes to the global search for solutions to the health challenges in Africa. Africa is currently in dire need of help to address the high prevalence of health epidemics which have plagued the people for many years. Besides the HIV/AIDS pandemic, the Ebola Virus Disease outbreaks in West Africa in 2014 added to the burdens that African countries have to bear, in addition to traditional fatal and chronic diseases, such as malaria, tuberculosis, and blindness. Scholarly work on sound ethical practices to guide and inform health policy is critically needed to help protect vulnerable populations from avoidable health epidemics and deaths. Bioethics, conceived in this project, is understood broadly to consist of that branch of applied ethics concerned with all aspects of bios, life. This conception of bioethics takes a broader framework than the standard idea of bioethics which is often conceived scientifically in biomedical and biotechnological clinical terms. Our focus on indigenous African systems of values and healthcare taps into systems that are very familiar to the people and easy to accept as guidelines for public health policy.

A brief outline of some of the outcomes of the project which I intend to share with the NKU community:

1. Contribution towards increasing the positive image of NKU in Africa, which further enhances NKU’s student recruitment efforts in Africa.
2. Contribution to NKU’s strategic plan and efforts toward internationalization.
3. Efforts to inspire faculty and administrators about the importance of integrating ethics into the curriculum across the disciplines. Examples include:
 - my work with Dr. Lynn Smith [faculty in the department of nursing] to co-organize and facilitate a TEEC faculty development workshop on “Solving ethical dilemmas from different points of view: An interdisciplinary conversation;
 - my initiated discussion between faculty in nursing and the Dean of the School of Nursing at the University of Ghana for potential collaborative projects.
4. Potential transformational impact on the discipline of bioethics: expanding how bioethics is conceived and practiced to include ethical questions on traditional healing practices.

African Bioethics, Health Care, Policy, Ethics, Traditional Health, Ethics Across The Discipline

Half Finished

Half Finished is a short film written and directed by John Gibson. This character piece/drama centers around an estranged son struggling to deal with his identity, and an unexpected surprise after the abrupt death of his father. The film stars, among others, Charlie Roetting (NKU Theatre Professor), and was crewed mostly by NKU Alumni and current students at the time. It was shot locally in Fort Thomas and Highland Heights, and has screened at two festivals, while still in consideration for a few more.

The purpose of this project was to create a film that exercised our creative muscles, and allowed many NKU alumni to get together with current students. It was one part storytelling exercise, one part networking. The goal or outcome was to create a festival ready film, which we will eventually release for free on the web.

I am a filmmaker and director, in addition to being a lecturer in EMB, and this film has allowed me to bring in many practical examples to my students about the craft. I'm able to discuss set etiquette, art direction, the casting process and more—not just out of a textbook, but also by telling real life examples from this project and others that I have completed.

The impact on NKU has been good as far as 1) it gave our students and alumni more experience, but also 2) gets our name out there. My filmmaker bio states that I am an NKU professor, and when I have a chance to speak to audiences I am able to talk about that these are our students and grads doing this work. We as a society have storytelling in our blood, and so when I present about our program, I am able to discuss the importance we place on story, and why it was important to me for this film. Additionally, we held a screening on campus with other student work that was well attended, with some of the guests being family and outside visitors, and they were able to see the great things our students (and alumni) are doing.

Working with a theater professor/actor on this project was amazing, and something that I hope to do with further projects. It's very beneficial for my crew—no matter how experienced or green—to see professional actors practice their craft, and I think NKU has some great individuals in this area. I hope this is the first of many projects utilizing the talent across both programs.

Fun fact: you should probably never title a work *Half Finished* because it does make introducing it quite challenging at times. Ha.

Short Film, EMB, *Half Finished*

Jaesook Gilbert, Teacher Education

Lenore Kinne, Teacher Education

Helene Harte, University of Cincinnati, Blue Ash College, Department of Behavioral Sciences

Fostering Family Engagement: Born Learning Academy

Born Learning Academy is a school-based, family engagement program for families with children ages 0-5 years old. The program is a six workshop series, conducted at a school building that teaches caregivers of children from prenatal to five years of age how to turn everyday moments into learning opportunities. The pilot was implanted at Beechgrove Elementary School in 2009 and expanded state-wide as a part of the *Early Childhood Race to the Top* grant for Kentucky. The program has expanded not only nation-wide but also internationally today.

Survey data indicate families enjoyed and learned from various workshops. The attendees not only indicated they intended to use what they learned at the workshops in their own interactions with their children, but actually followed through on those intentions at home. Therefore, short-term outcome demonstrates effectiveness with family engagement. However, the long-term desired outcome is to see a change in families' relationship with their children's school staff as a result of a change in parent-child interactions at home. With schools that already implemented all six workshop series in past academic year, many choose to continue their relationship with past year families in a manner that meets their needs and interests. To determine whether there is a long(er)-term perception/behavior change in families towards school system and family's role in children's school readiness, a parent survey has been developed. This survey was piloted with Kentucky "alumni" schools in 2017, and the results indicated increase in positive responses pre-survey to post-survey.

Family Engagement, Home-school-community Collaboration, Early Childhood Education, School Readiness

Egalitarianism and Social Hierarchy: Values of NKU Students

Power Distance is a cultural dimension that measures the extent to which the members of society believe that power and authority is either earned by achievement or granted to some based upon social status. High Power Distance cultures are generally known for their reliance upon social hierarchy, such as monarchies, where one's worth is based upon birthright. Low Power Distance cultures are generally typified by an egalitarian approach to achievement, where one's worth is based upon one's contribution. This study investigated if there are measurable differences in the way that a sample of 329 NKU students value Power Distance based upon their socially constructed identities and personal value systems.

Personal values were explored using a construct that assesses an individual's drive for self-enhancement. This construct is divided into two separate personal values that depict one's desire to increase their social standing and power, as well as one's desire to set goals and achieve them.

Analysis of the results shows that there are not significant differences in our student sample's personal value systems, however there are significantly different beliefs about how much Power Distance should be in our society based upon socially constructed identities. Regression analyses indicate our students may vary their beliefs about Power Distance based upon their identities and personal value systems.

Findings of this study indicate that portions of our student body hope for an egalitarian society where they can demonstrate their capabilities, while other portions of our students might desire a situation where their success is less dependent upon their capabilities and more upon the values ascribed to them. This study suggests further exploration into best practices for development of egalitarian approaches to the classroom and co-curricular experiences at NKU.

Culture, Values, Power Distance, Achievement, Egalitarian, Identity



If We Believe It's a Disease, We Want to Help: Understanding Attitudes Toward Evidence-based Heroin Use Disorder Policies

Our region has been hit hard by the current heroin epidemic. In a Pulitzer Prize-winning exposé, for example, *The Cincinnati Enquirer* documented 18 deaths and at least 180 overdoses in a single week in July 2017. Although local coalitions have gradually gained support for some progressive policies, implementation faces continued opposition in many communities. Antagonism is evident in that many first responders do not carry naloxone to quickly reverse opioid overdoses, drug-free rehabilitation approaches with no empirical support still dominate the treatment landscape, and no syringe services programs operate in the most heavily impacted areas of northern Kentucky.

To understand the roots of opposition or support for heroin use disorder policies, my students and I have conducted six studies over three years. We have measured attitudes toward three evidence-based practices: overdose prevention with the antagonist medication naloxone; medication-assisted treatment using naltrexone, buprenorphine, or methadone; and syringe services programs (a.k.a. needle exchange). Gathering data from three samples of NKU students (total N = 619) and three samples of U.S. residents employed by Amazon's Mechanical Turk online database (total N = 1862), we used multiple regression analyses to predict attitudes toward these practices.

The predictor and criterion variables differed slightly across the six studies. However, each study measured attitudes toward medication-assisted treatment, and four also evaluated attitudes toward overdose prevention and syringe services programs. Each study assessed respondents' beliefs about how much control people have over heroin use disorder (perceived controllability) and the extent to which respondents consider the disorder to be a biological disease (disease model beliefs). Each study also asked participants to report their political identity, from extremely liberal to extremely conservative.

In all six studies, perceived controllability strongly predicted attitudes toward the evidence-based practices. People who believe that heroin use disorder is within one's control are less likely to support efforts to address the problem, and those who think the disorder is not under an individual's control are more likely to favor such efforts. While other significant predictors were identified in individual studies, no other variable came close in terms of consistency of prediction. The results make theoretical sense; Weiner's (1980) theory of responsibility attributions posits that when we think people have control over negative behaviors, we blame and want to punish them. Indeed, a large body of research suggests that Americans excel at blaming and stigmatizing people with substance use disorders.

Finally, we explored the predictors of perceived controllability; each study consistently identified disease model beliefs as the most important explanatory factor. People who think that heroin use disorder is a disease likewise believe it is not entirely within affected individuals' control and support progressive efforts to mitigate it.

My students and I now seek ways to use the results of these studies to generate support for evidence-based practices. So far, we have been unable to alter disease model beliefs, and we are interested in potential collaborations that may lead to this outcome. We also seek to explore the role of political identity within our prediction framework.

William T. H. Howe, “Freelands,” the Irish, and the Business of Literature

This is the story of a Cincinnati man who had amazing success as a collector of rare books and manuscripts, who rose to captain the world’s largest textbook publisher, and who befriended some of the century’s most important literary men. W. T. H. Howe (1868-1939) was one of the most important rare book and manuscript collectors in 20th-century America, spending an estimated two million dollars—\$48,000,000 in 2015 money—in accumulating his collection. Raised in upstate New York and Yale educated, he took a Ph. D. in Chemistry before moving to Cincinnati in the early years of the 20th century. Here he worked as a textbook representative for the American Book Company, the biggest and most powerful textbook publisher in the nation. Working his way up the corporate ladder, he was named company President in 1931, and he guided his firm through most difficult years of the Great Depression. Howe split his time between his home base in Cincinnati and the corporate headquarters in New York City. He also became a trustee of Yale’s library, and he worked with Yale professors such as Ralph Gabriel and Stanley Williams both to produce textbooks and to encourage their scholarly publications. Howe’s book and manuscript collection was extensive, and he shared it with many scholars. Some of the notable items in his collection included an incredibly rare first American edition of *Alice in Wonderland* as well as a similarly rare copy of Edgar Allan Poe’s *Tamerlane and Other Poems*, which made national news in 1938 when it was purchased by Howe.

During his over thirty years in publishing and book collecting, he became the friend and ally of many contemporary authors, including the Kentucky poet Madison Cawein, Joseph Conrad, John Galsworthy, J.B. Priestley, and Joseph Auslander. Howe was especially involved with writers of the Irish Literary Revival, including George William Russell (AE), William Butler Yeats, Padraic Colum, and James Stephens, amongst others. Of these, he became closest to the Irish poet Stephens, who visited Howe almost yearly through the 1930s. Howe promoted his literary visitors, brought them to Cincinnati to lecture, and entertained them at his Kentucky farm estate, *Freelands*. Letters and photos document their visits, and *Freelands* still stands in southern Campbell County, nearly unchanged. Undoubtedly, Howe’s most enduring legacy is his book and manuscript collection, which is now enshrined at the New York Public Library. His collection was purchased en bloc by Dr. Albert Berg, and was donated to account for nearly half of the original holdings of the NYPL’s famous Berg Collection. Howe’s story is important to Cincinnati and Kentucky history, yet it has so far been untold; this presentation aims to share his tale.

Bibliophilia, Irish Literary Revival, Textbook Manufacturing, Ohio Valley History

Susan Griebeling, Teacher Education
Jaesook Gilbert, Teacher Education

Kindergarten Transition: Examining the Value for Children, Families and Schools

The focus of this research is a summer Kindergarten transition program for incoming kindergartners called Me and My School (MMS).

The MMS program was developed in a collaborative partnership between NKU Early Childhood Faculty and United Way of Greater Cincinnati's Success By 6®, Northern Kentucky. There is no prescribed curriculum, however a typical day for the children includes large group, literacy, math and large motor during a morning program. Lunch is provided in most of the programs and parents are often invited to eat with their children. Family Kindergarten Transition Kits are given to each child to engage families in their child's education. This is a child's backpack filled with learning materials and a set of six bingo-type cards. Each of these bingo-type cards has different activities for child and parent to complete in all developmental areas using the materials in the backpack. Parents check off the activities as they are completing them with their child and return the card to school each week for an incentive. Each school is required to have at least two events for the MMS families, two events for bringing all kindergarten families together, and work with at least one community partner for the MMS program.

Specific research questions for this study are:

1. Does a summer kindergarten transition program impact children's readiness for kindergarten?
2. What is the impact on the parent-school-partnership and engaging families?
3. Does a kindergarten transition program help schools become better prepared for the children entering their kindergarten program?

The pilot year, Summer 2014, began with 9 districts, and 6 schools. This summer (2018) 23 schools representing 13 Northern Kentucky school districts (Bellevue, Boone, Campbell, Covington Independent, Dayton, Erlanger-Elsmere Independent, Grant, Kenton, Ludlow Independent, Newport Independent, Pendleton, Southgate Independent, and Williamstown Independent) will be implementing MMS program. Results from 2014-2017 summer MMS programs suggest that a summer Kindergarten transition program that focuses on children, families and schools can positively impact children's readiness for kindergarten as well as increase connection between the school, family and the community organizations. MMS not only provided educational opportunities for children but also facilitated access to the culture of schools, allowing children to become prepared socially and emotionally, leading to children being better prepared for academic work. Another positive impact of MMS participation was better family-school relationships. In conclusion, this study provided evidence that a comprehensive kindergarten transitioning program that focuses on the child, the family and the schools helps prepare children and families for the move to more formal schooling.

School Readiness, Early Childhood, Home-School-Community Partnership



“The SIBA Initiative”: Life Skills through Theatre Skills

In December 2014, as a member of an exploratory team that the Provost led to Sri Lanka, I visited Sri Lanka International Buddhist Academy (SIBA). During our meeting with personnel there, I was mostly silent because the discussion focused on the sciences. Immediately after the session, a SIBA faculty member who also had been silent approached me. Ms. Buddhi Ariyaratne, a lecturer in the Department of English, introduced herself, saying that she had been contemplating the use of Shakespeare (specifically *Hamlet*!) to help her students to learn to use English more confidently, and to gain more confidence in themselves. Yes! The combination of brilliance and absurdity sparked explosions in every part of my being: the scholar, the artist, the global citizen, the dreamer. The concept connected perfectly with several of my core beliefs and research building blocks. The “ritual origins of theatre” theory, for example, is the foundation of my ongoing active research. According to that theory, historically, each world culture at some point sat around campfires and told stories. This common heritage opens the door for theatre potentially being a common thread linking us all—specific cultural differences notwithstanding. The spark of Ms. Ariyaratne’s idea combined with the explosions it set off within me birthed “The SIBA Initiative.”

“The SIBA Initiative” is so named because I combined drama workshops I have conducted throughout the world, and specifically tailored them for the purposes of developing language and presentational skills. Between 2015, and 2017, I conducted four workshops that concluded with public performances by SIBA students. Weeks after the 2015, two-week session, which concluded with an enhanced staged reading of an adaption (by NKU playwriting student Alexx Rouse) of *Hamlet*, Ms. Ariyaratne reported marked improvements in her students’ focus in class, their core language skills, and their general self-confidence. The longer 2016 session concluded with another Alexx Rouse adaptation, Shakespeare’s *A Midsummer Night’s Dream*, dubbed *A Mid-Star-Wars Night’s Dream*. For 2017, one of the monks who was a student participant in the 2015 program, and who served as an assistant in 2016, suggested that instead of a Shakespeare play, it would be appropriate to center the project on an English translation of a classic Buddhist tale. That suggestion resulted in the most elaborate processes and productions so far: the 2017 world première English translation of the Jataka tale, *Sanda Kinduru*. My proposed presentation documents the first three years of “The SIBA Initiative,” and the ways that it has equipped its participants, both Sri Lankan and American, to become better-prepared global citizens, better-prepared players on the world stage.

To date, this project has involved students and faculty from SOTA, and from Electronic Media and Broadcasting. Additionally, I am working with NKU’s American English Language Program to incorporate versions of the program into its curriculum. I hope to entice future participation from our areas of English, Education, Religious Studies, Asian Studies, and more. The whole world is indeed a stage, and there are parts in this project for each of us.

Drama, Theatre, English, Religious Studies, Global Studies

“To Sit or Stand”: Transgender Persons, Gendered Restrooms, and the Law

The issue of transgender bathroom access appears to be one of the next major area of the struggle for expanded civil rights for LGBTQ persons. Over the past two years, states have considered and passed legislation defining gender and restricting access for transgender persons, particularly students, from the restroom that corresponds with their gender identity in public facilities, particularly public schools. In response the federal government, through the authority of the Department of Education and the EEOC, has pushed back against these state restrictions arguing that both Title VII and Title IX provide protections for transgender persons to access the restroom facilities that correspond with their gender identity. With the beginning of the Trump Administration, the landscape surrounding these issues has changed even more.

In order to understand the issues raised surrounding restroom facilities, it is important to examine the history and background of the development of gendered restroom facilities in public facilities and workplaces. This research first examines the history of sex-separation in restroom facilities in public facilities, exploring how this separation was firmly rooted in the “separate spheres” ideology of the nineteenth century. The central thesis of this ideology was that a woman’s proper place in society was to be in the home, tending the household and rearing children. However, the emergence of technology, industry, and transportation in America in the nineteenth century began to challenge this “separate spheres” ideology as an increasing number of women left the home to enter the workplace to meet the demands of an expanding economy. These developments ultimately led legislators to regulate public architectural spaces in order to preserve a Victorian social view of women. One aspect of this regulation was the creation of sex-separated toilet facilities, washrooms, and dressing rooms.

After examining the historical context for gendered restroom facilities, this article then turns to a discussion of the emerging body of law regarding the protection of access for transgender persons to the restroom facilities that correspond with their gender identity. By way of example, the article examines in depth the issues developed through the case of Gavin Grimm, looking at the case from its inception to its very recent conclusion before the United States District Court.

Ultimately, this research calls for a much more robust understanding of gender pluralism in addressing these legal issues, centering the power of determining gender identity in the individual, rather than the law or the school or the state in some fashion. The result of such an expansive understanding of gender should lead the Supreme Court to expand the legal understanding of prohibited discrimination because of “sex” under Title VII and Title IX to include transgender persons.

Sexuality, Gender, Discrimination, Title IX, Transgender, Gender Identity

Sensemaking Among Parents of Children with Special Needs: Improving Understanding, Coping and Decision Making

Parents of children with special needs are continually receiving and seeking out complex information to help them care for and raise their child (Samios, Pakenham, & Sofronoff, 2012). Medical, educational and social information related to physical and intellectual disabilities often can be quite difficult to understand and process as well as emotionally overwhelming. The sensemaking process proposed by Weick, Sutcliffe and Obstfeld (1995) explains how individuals process, understand, cope with and take action on new information. This fall 2018 sabbatical research project is exploring the sensemaking experiences of parents who have children with special needs, focusing on its coping and decision making aspects.

Sensemaking research has typically focused on organizational or work settings and has rarely investigated how the process works with parents of children with special needs (e.g., Maitlis, 2005). The limited amount of research done has focused primarily on the coping aspects of sensemaking with little attention given to message content, information processing and decision making (e.g., Samios, Pakenham, & Sofronoff, 2012). In addition and more narrowly, medical diagnosis communication research, part of the sensemaking process, typically is conducted by medical scholars (e.g., Bartolo, 2002; McCabe, 2004). This research often lacks a reference to health communication theory and research. Investigating this topic from primarily a communication and sensemaking perspective will broaden our ability to understand it as a communication and decision making process. Drawing upon extensive healthcare provider-patient communication research as well as sensemaking research has guided the development and implementation of a study in which a series of focus groups with parents of children with special needs are being conducted to investigate the sensemaking process parents go through as they navigate medical, education and social systems on behalf of their children.

Although the research is being primarily conducted in the southwest Ohio/northern Kentucky region, it will have practical applications for not only members of the special needs community and healthcare professionals in this region, but also nationwide. This study is the beginning of a long term research program that eventually will expand to a national focus. Promoting ways to help parents process and make sense of information related to their children's special needs will assist them in coping with and making better decisions in regards to their children's care. The connections being made with local parent support groups will lead to future partnerships that will help these groups do a better job advocating for their communities.

The medical and education communities also will benefit from this project as the results and recommendations from this study will provide concrete, trainable strategies to deliver information to parents of children with special needs, which is critically important because, for example, research indicates effectively communicating a diagnosis of any illness can have positive outcomes in terms of patient compliance with treatment plans, patient acceptance of the diagnosis, and ultimately the health of the patient (Zolnieriek & DiMatteo, 2009).

Preliminary results from the interviews are expected by the time the Spotlight on Scholarship event occurs.

Sensemaking, Decision Making, Special Needs, Parents, Disability, Children

Improving Northern Kentucky's Watersheds One Volunteer Planting Event at a Time

Reforestation efforts around the country are dominated by the method of volunteers donating talents and time with some to no monitoring or follow-up. Little published information exists on tree survivorship from volunteer planting events - are the volunteers' efforts successful in the long-term? To address this knowledge gap and more, a unique partnership has grown between the Northern Kentucky Urban & Community Forestry Council (NKUCFC) and the Hopfensperger research lab at NKU. NKUCFC has coordinated the annual Reforest Northern Kentucky native planting event for 10-years, reforesting 36-acres of land through the engagement of 2,500+ volunteers. In 2015, Hopfensperger partnered with NKUCFC to develop a long-term research plan for assessing the success of volunteer planting events. In this effort, Hopfensperger leads undergraduate students and NKUCFC volunteers through data collection and analyses on soil characteristics of planting sites and tree survivorship data. The NKUCFC-NKU partnership is guided by the following long-term goals: (1) learn about multiple-aspects of volunteer planting events, (2) provide opportunities for NKU undergraduate students to gain relevant skills and experiences, and (3) share results with entities performing similar efforts. To reach these goals, six students have worked to collect data from ten sites, thus far. Each year pre-planting data is collected from the event site before planting, including a full analysis of the soil. During the event NKU students and volunteers collect data on the tree seedlings. Reforested sites are then monitored on a scheduled rotation for tree survivorship. To date, we have found the Reforest Northern KY events to be quite successful with high survivability of the planted trees and little spread of invasive species into the reforested areas.

Our NKUCFC-NKU partnership has proved to be a unique and successful model for generating new scientific information through public engagement. In the long-term, we will gain a better understanding of tree survivorship from large-scale volunteer planting efforts, relationships between soil characteristics and tree survivorship, and the changing dynamics of soil post-reforestation efforts. Our data adds value to major U.S. Forest Service initiatives and will be used to inform land managers and event organizers across the U.S.; thereby, leading to more efficient and successful reforestation events and more land reforested. Reforested sites provide significant benefits to the surrounding community, improving the environment, economy, and quality of life. Our partnership efforts provide an opportunity for public education and awareness about the importance of trees in our region, and provide a model for how nonprofit-university partnerships can improve services to the community. We anticipate the NKUCFC-NKU partnership to continue long into the future as a unique way to assess volunteer reforestation efforts while providing impactful experiences for the next generation of land managers.

Citizen Science, Forests, Public Engagement, Restoration, Tree Survivorship, Undergraduate Research, Water Quality



Social Networks, Resiliency, and Development: Expert Sugar Cane Farming Knowledge in Northern Belize

In collaboration with several developmental organizations focusing on farming and community development in the region, cultural model data on agrochemicals, pests, soils, and sugar cane varieties have been collected over five summers as part of an ethnographic field school among communities in northern Belize. The expertise of farmer's knowledge of sugar cane varieties varies in both the depth and breadth of their knowledge in part due to the number of years that they have been farming, but years farming only explains a portion of the variation in knowledge.

This presentation includes the methods of data collection, analyses, and findings for what social networks (i.e., kinship, friendship, and farming collaboratives) contribute to the intracultural variation of sugar cane variety knowledge among farmers. The findings will inform how an expert might be situationally defined as knowing either depth or breadth of cultural knowledge that then impacts short term resiliency (knowledge about current crop varieties) and long-term resiliency (knowledge about a current, future, and past crop variety varieties).

This presentation will conclude with a discussion of how these findings may be used by this project's collaborators (Belize Sugar Cane Farmer's Association, National Institute of Culture and History, Progressive Sugar Cane Producer's Association, and Sugar Industry Research and Development Institute) to develop and conduct workshops for farmers on agricultural techniques, economics, health, and other community development topics.

Social Networks, Knowledge, Farming

We're Online, but Are We ADA Compliant?

As more and more colleges and universities witness unprecedented growth in their web-based offerings, both fully online and blended, one area of frequent neglect is the accessibility of the classes for students with disabilities. Online course sites must be accessible to students with disabilities, but the training of instructors in accessible design has often been an afterthought. While it is true that online courses may provide a more manageable college education for a wide array of students with certain disabilities, the very format of these courses may render the classes inaccessible to individuals with vision or hearing impairments. Thus, online courses can be a source of reduced instructional quality as well as a legal vulnerability. The purpose of this research was to investigate the current extent of our NKU faculty's familiarity with the rights, responsibilities, and resources pertaining to the Americans with Disabilities Act (ADA) and Section 508 of the Workforce Rehabilitation Act insofar as compliance and accommodations for online courses. Our university has witnessed an expansion from 1,130 students taking at least one online course in fall 2005 to a recent total of 5,771. Concurrently, the number of online courses offered has burgeoned from 82 in 2005 to 475. Admittedly, when online education was in its inaugural stages, we focused primarily on the sheer logistics of getting the classes online and developing standard course materials to cover content for a general population of students. The need to compete with other institutions often got ahead of thoughtful planning. We were much less contemplative that many individuals with hearing impairment rely upon captioning when watching video presentations, and students with vision impairment utilize assistive technologies such as voice recognition software and screen readers. So, apart from the obvious desire to meet legal expectations, we are now committed to making content easily accessible, comfortable, and effective for a diverse range of students.

Through the collection of data, we sought to heighten awareness and encourage faculty to look at and think about how their online programs and courses are consistent with accessible design, thereby providing a real opportunity for continuous improvement in both course design and implementation. An electronic researcher-created survey instrument (fixed and open ended) produced 92 faculty responses and revealed that accessibility compliance for sensory disabilities within online courses has not been achieved and a lack of familiarity with the requisite expectations is also very much in evidence. Faculty raised topics such as when courses should be designed to be accessible and who bears ultimate responsibility for compliance. We will discuss several initiatives to facilitate expediency on this matter as well as cultivate a more "humanized" instructor presence within online classes. We were provided with critical data that will allow us to assist instructors across campus with accessible design, address the issues they perceive as barriers, and emphasize the wisdom in being proactive with online development. We also provide a snapshot for the institution as to where we stand presently in our quest to provide educational opportunities for all students.

ADA Compliance, Disabilities, Online Education, Distance Learning



The Power of Story: How News Frames Influence the Way People Talk About Emotions

Within the literature on message framing and health communication, scholars have called for a deeper examination of message framing's impact on emotional reactions to health messages. Understanding framing's impact on emotions will allow health communicators to create more targeted messages and also allow for the news media to report more ethically and responsibly. The present study will present the results of two experiments designed to explore the effects of multiple types of frames (thematic and episodic and gain and loss) on emotional responses to health news stories.

Previous work has found that framing does impact media consumers' emotions. Within framing research, researchers have found the stories that are structured about an individual facing a problem (episodic framing) have been found to inspire more emotion (Gross, 2008; Aaroe, 2011) and are more likely to cause audiences to blame that individual and believe that individual is responsible for fixing the problem (Iyengar 1991). Alternatively, thematic stories, which focus on broader cases, were found to be more persuasive (Gross, 2008) and might lead to an understanding of a shared responsibility to fix the problem (Iyengar 1991).

While several studies have examined the impact of frames on emotion in a quantitative way, these studies (N = 135; N = 105) use qualitative data to take a richer look at why people may respond differently to different types of frames.

This current study uses textual analysis to examine qualitative data from two previous studies in which participants read manipulated news stories about obesity, depression, and drug abuse. In study 1, a 2 (thematic, episodic framing) x 2 (gain, loss framing) experimental design was utilized to examine how participants explained their emotions upon reading the stories. Results indicated that story framing impacted the ways participants contextualized their emotions; for example, those who read thematic stories were more likely to contextualize their feelings in a global or "big picture" way, while episodic readers focused on the individual's experience present in the story. Furthermore, loss frames directed negative emotions while gain frames did not overcome participants' own negative associations with health issues — negative emotions were described in the context of one's own experience even if the story was framed in a positive light. Study 2 will expand this understanding. It focuses on the health issues of obesity, depression, and drug abuse. In study 2 (in the data analysis stage), all stories were gain-framed and the experiment manipulated stories to be episodic, thematic, or an episodic/thematic combination story. This combination more closely mirrors a real-life news story and will help further explore the emotional power of episodic and thematic frames. Comparing the results between the two studies will allow for a richer understanding of the impact of news framing.

Media Effects, Framing, Health Communication



From Kentucky to Kochel Am See and Back Again

In my presentation “From Kentucky to Kochel am See and Back Again” I will take the audience on a journey that began with my preparations for teaching a course on the history and culture of Munich for the KILS program in Munich and ended with the publication of a series of poems in 2017.

I will trace my interest in the artist group The Blue Rider, whose works foray into the emerging world of abstract art, from my course preparation in Landrum Hall to the museums of Munich and on to the tiny town of Kochel am See. Once back in Kentucky, my knowledge and observations relating to the artists and art of The Blue Rider began to take shape in the seven poems I contributed to a collaborative chapbook of ekphrastic poetry (poetry that interacts with another art form). During the time the manuscript was under consideration for publication, the journey continued.

I developed and taught a course at NKU called History and Culture of Munich. As a result of a collaboration with colleagues in the art department and the library, I included a unit in my course in which my students created artworks based on Blue Rider art, which we displayed in the Steely Library. This unique educational venture will be the subject of a presentation planned for a state-wide pedagogical conference (KWLA) in 2019. Then, in 2017, the chapbook containing my poems, *Frame and Mount the Sky*, was published by Finishing Line Press in Georgetown, Kentucky. Publication of the chapbook has resulted in my poetry being available in local libraries and bookstores. Bringing this work to the community through access to the text and planned readings encourages community interaction with art and texts and promotes the idea of collaborative writing, which has been relatively unexplored in literary disciplines.

My presentation will end with the reading of a few poems on Blue Rider art and proceed to describe the next step of the journey, in which I have begun a new series of poems inspired by the works of a contemporary artist living in Munich, Bianca Artopé. The circle from Kentucky to Kentucky is closed, but the possibilities are numerous and include readings, pedagogical presentations and further creative and collaborative output.

Poetry, Art, German, Literature, Pedagogy, Collaboration, Museum



Therapeutic Expression

Words have the power to uplift, and words have the power to inflict damage. Modern free speech debate has emphasized the latter, resulting in two divergent schools of thought around the connection between speech and harm. On the one hand, critical race scholars argue in favor of safe spaces, trigger warnings, and other restrictions on expression based on the idea that speech inflicts secondary trauma on vulnerable people. On the other hand, constitutional originalists dismiss the notion that the First Amendment is concerned with resultant harm at all, focusing instead on the legality of the speech itself unrelated to its impact in society. Neither of these approaches strikes the correct balance between the right of individuals to speak their mind and the interpersonal and societal damage that sometimes results from an unregulated free speech marketplace.

Against that backdrop, this work explores the relationship between free speech and psychological harm. Examining the historical justifications for the First Amendment, it argues that – contrary to the originalist approach – harm is in fact a relevant criterion in determining the scope of free speech protection. Indeed, all of the historical exceptions to First Amendment protection, including child pornography and true threats, are based upon the perception that the speech lacks value and causes injury to others. But this work also exposes flaws in the notion that speech should be restricted solely based upon the harm it may inflict, demonstrating instead that the freedom to speak freely actually forestalls rather than leads to individual and societal harm. Drawing upon prevailing psychological and sociological theories related to the treatment of violent and sexually aggressive perpetrators, the article posits that the ability to engage in free and unrestricted expression is critical to preventing physical and emotional damage to others. As the psychosocial research indicates, individuals who have the ability to speak freely about their emotions, thoughts, opinions, and identities are less likely to engage in rebellion, aggression, and crime. In this way, the right of free speech provides a therapeutic alternative to harmful behavior, and the therapeutic qualities of expression provide a justification for protecting rather than silencing it.

This article posits a new theory, never before explored in legal scholarship, regarding the connection between speech and harm that has the ability to impact the ongoing debate over free speech generally and on college campuses specifically. Its transdisciplinary orientation provides significant potential for collaborations between legal, psychological, and sociological scholars and for additional research on the impact of viewing the right of free speech through a therapeutic lens.

First Amendment, Free Speech, Constitutional Law

Communication in Kink: Understanding the Influence of the *Fifty Shades of Grey* Phenomenon

People use popular culture phenomena as tools to broach varying topics and current events when teaching classes and conducting research. We also use it to initiate conversations about taboo topics, which may include aspects of sex and sexuality that people may not discuss otherwise. We must recognize the importance that popular culture plays on how we discuss, rationalize, and enact aspects of our lived experiences. Specifically, people use popular culture as a way to examine their sex lives, how they communicate about sex, and how they view sex. This book examines popular culture with an emphasis on what it can tell us about sex, communication, gender, power, relationships, and the media. The goal of this edited book is to provide a clearer understanding of the impact of the *Fifty Shades of Grey* series on communication about sex in varying contexts (e.g., romantic relationships, media) and how it has, positively and negatively, influenced the kink community.

The purpose of this book is to bring together a collection of viewpoints on the popular culture phenomenon, *Fifty Shades of Grey*. Scholars with differing paradigmatic backgrounds (e.g., critical, gender, narrative, social science) and disciplinary backgrounds (e.g., interpersonal communication, journalism, popular culture studies, gender studies) have been chosen to offer a broad selection of perspectives that readers can engage. Each scholar brings their unique ideologies and perspectives but are bound together by the belief that this phenomenon has had a meaningful impact on the lived experiences of others and is, therefore, a valuable form of popular culture that needs to be explored.

The structure of the book uses relatively brief chapters that contend with issues surrounding media coverage, influence on the kink community, effects on romance novelists, communication in romantic relationships, stigma, power, and more. Each chapter is an exploration of the *Fifty Shades of Grey* phenomenon and the impact it has had on various aspects of media, lived experiences, sex, and communication.

This book is currently under contract with publication expected by December 2019. I will approve the chapter proposals in June with first drafts due in October. As the editor of this book, I will give an overview of the book chapters for my presentation at the NKU Spotlight on Scholarship. I am currently conducting a study on the effects of *Fifty Shades of Grey* on people participating in kink acts at a members-only kink dungeon will be represented as a chapter in the book.

Popular Culture, Sexual Communication, Kink, *Fifty Shades of Grey*



Thinking Back Through Virginia Woolf: Narrative Futures in Women's Literature and Culture

Virginia Woolf writes in *A Room of One's Own*, "For we think back through our mothers if we are women. It is useless to go to the great men writers for help." These sentences initiate a generative project of second-wave feminism: the creation by feminist authors, critics, and scholars of a canon of women's literature. From our current vantage point in feminism's third wave, it becomes possible to revisit this project of canon-formation.

The purpose of my research is to uncover Woolf's ongoing influence on techniques for narrating women's lives. The outcomes of the project are twofold: 1) to explain Woolf's pervasive impact in the twenty-first century on authors including Doris Lessing, Margaret Atwood, Fatima Mernissi, Zadie Smith, Chimamanda Ngozi Adichie, and Jenni Fagan; 2) to connect the narrative futures imagined by women authors of literary fiction to contemporary social justice movements (The Women's March, #MeToo) and popular manifestations of those movements, most notably in music and cinema.

This research, which I have been invited to publish in the *Oxford Handbook of Virginia Woolf* (Ed. Anne Fernald, Oxford University Press, 2019) and to present as a plenary speaker at the 29th Annual Virginia Woolf Conference (2019), significantly contributes to literary studies because it refocuses critical attention toward the material conditions that shape women's writing. These conditions determine both the stories that women tell and the audiences that they attract. I insist that gender continues to matter as a discrete category for literary critical analysis: it should not be abstracted from real women's lives or filtered solely through the lens of sexuality. Furthermore, I advocate for the significance of literary and cultural texts by women to everyday readers, and I investigate the practical impact of these works on contemporary ideas about women's identities.

Thus, this project has benefit not only to my discipline but to the public. By demonstrating the ways in which literature connects to current controversies and debates about women in society, and by investigating the ways in which literary texts represent women's emotions, experiences, relationships, and ideas, my research demonstrates the value of literature to those outside academia who read for pleasure, enrichment, and connection to others in their communities. By taking seriously the ways that art can both mirror our world and project new possibilities for it, my research illuminates the significance of women's stories and the relevance of writing that showcases them.

By presenting this scholarship in this forum, I hope to connect with other faculty members outside of the English department to understand the ways in which my project about women and literature might connect to their own work on women and technology, the arts, or other fields. Ideally this could lead to a collaborative presentation or series of presentations that we could bring to public audiences in the local community or region. I also see potential for this presentation to lead to pedagogical collaborations in the Honors College.

Literature, Feminism, Virginia Woolf, Narrative

Doug Krull, Psychological Science
Erika Metzger, Psychological Science

Crime Images and Biracial Faces

The goal of this project was to explore the effect of exposure to images related to crime on whether biracial faces were categorized as White or Black. To the degree that people associate crime with people who are Black, people might be more likely to categorize biracial faces as Black after viewing crime images. Participants viewed either only neutral pictures (e.g., a bicycle, a class of students) or neutral pictures and crime pictures (e.g., prison cells, police car). Then participants viewed a series of faces, each of which was created by blending a White face with a Black face, with the goal of categorizing the person as White or Black. Participants also completed a psychological scale designed to measure one's motivation to control racism, which enabled an investigation of people who are motivated to control racism for external reasons (i.e., I don't want people to criticize me) and/or for internal reasons (e.g., My personal principles oppose racism). In general, results were weak, but motivation to control prejudice was related to how the faces were categorized to some degree. We hope to continue this work in the Fall.

Stereotypes, Racism, Priming



Chindonya: Vanishing Traditional Performing Art of Japan

The purpose of my research project is to introduce chindonya to the academic and non-academic community interested in Japanese culture in order to keep it alive. At the same time, I will consider the reasons why this particular art form remains obscure even among the Japanese.

Chindonya is a troupe of street musicians and performers dressed in elaborate costume who are hired to draw customers to shops. Although its origin can be traced back to feudal Japan, chindonya had become widespread after the Meiji Restoration of 1868 with the growth of free market economy in the late nineteenth century. During its heyday in the 1950s and 1960s, there were 2,500 chindonya troupes across Japan. Regrettably, with the recession in the 1970s and the rapid development of other advertising media after the 1980s, chindonya has become obsolete and less than 35 professional troupes remain today. There have been a couple of interesting developments in recent years, however. First, a small, yet steady number of college educated young people have joined the profession. Second, the chindonya-style performance has been used at an anti-US military music festival in Okinawa, at a summer festival in a predominantly Korean neighborhood of Osaka and at an anti-nuclear power plant gathering in Tokyo. Surprisingly, despite its long history and contribution to Japanese culture and society, chindonya has been rarely studied academically.

During my sabbatical leave in Spring 2018, I conducted research on chindonya in Japan by attending two national competitions, interviewing professional as well as amateur performers, and observing them at work and at shows. Through this experience I have become aware of little interest and attention given to chindonya by Japanese society in general. This is odd because there has been tremendous effort by both governmental and non-governmental organizations to preserve not only traditional performing art such as Kabuki Theater but folk art, including traditional Ainu dance. As of May 2018, 21 traditional and folk art forms are listed as Intangible Cultural Heritage with UNESCO. Such inattention to chindonya is not because it is forgotten by Japanese society as attested by local and national media coverages. My hypothesis at this point is that chindonya is overlooked because it was commercial – it was used to sell products and services – and thus was not considered a pure art form. Additionally, chindon performers historically came from the working class. In short, the traditional high culture bias against popular culture is at play here. In order to prove my hypothesis, I plan to investigate other art forms which are getting little attention despite their contribution to culture and history of Japan and other countries. Once the reasons for inattention are found, I will explore the ways to change the perception of chindonya among the Japanese. The results of my research will contribute to the preservation of chindonya and other popular art forms. It is of interest to scholars in folklore and art as well as those interested in Japanese culture.

Chindonya, Japanese Culture, Performing Art, Popular Culture

Community Policing (COP) and the Future: The Discovery of the Hidden Driving Force of Citizen Participation in the Collaboration with the Police

Community policing (COP) has been the most prominent policing philosophy during past three decades in order to promote a strong partnership between police and community. Especially, the role of COP has been spotlighted again since the relations between police and community has deteriorated in recent years. As many scholars debated, however, the effectiveness of policing programs based on COP is in questions. While citizen participation is one of the crucial part in successful implementation of COP, numerous studies examining its effectiveness focused heavily on the direct association with crime rate or public perception. Only handful studies focused on citizen participation. A review of the literature reveals that there is very little information on why citizens participate in the collaboration with the police. More specifically, the main factor that drives citizen participation in COP programs is relatively unknown. This information is valuable since it can contribute to the way to strengthen the police- community relation. Therefore, adapting Easton's theory of public support of government agencies, this study examined the main driving force of citizen participation in the police program based on COP. Houston Police Department operates a monthly police-community communication meeting program to prevent and solve neighborhood problems that are the concern of residents. This study used a survey data collected from the citizen participants of the COP program in Houston, TX in 2014. Structural equation modeling was employed for analysis in this study. The result revealed that diffuse support, a naturally gained attitudinal support toward government agencies, is the major driving force of citizen participation. This study offered relevant policy information to improve the efficacy of COP programs. Additionally, an offered policy relevant project from this study is currently in progress with local police departments.

Community Policing, Citizen Participation, Police-Community Relations, Diffuse Support, Attitude Toward the Police



The Drawing Database-YouTube Channel

The purpose of this research channel is to provide supplemental instruction in drawing for our Visual Art Students at Northern Kentucky University as well as alumni/alumnae and can be used by interested other students nationally and internationally. The video lectures are to be approached as "active learning", meaning that the student is expected to get the most out of the lessons by drawing with them. These lectures explore the basic mechanics of drawing via observational and perceptual training. They are meant to be a basic, intermediate, and advanced guide to enhancing the craft of visual perception through drawing so that any level of student may apply these skills to more advanced and professional problem solving in art making, in an array of styles. The link is provided:

www.youtube.com/channel/UCNPLX1hfy3Q8zr4eKvmhLGQ?disable_polymer=true

The channel is a teaching tool for all of our drawing courses, is implemented as a supplement in the studio classroom, and is a public service outreach program, free, and available to the public anytime-there is no fee. The channel serves students from almost every country on the globe, with outreach most popular in the US, Great Britain, India, Germany, and Brazil, but it has subscribers in Pakistan, Argentina, Madagascar, Angola, Cambodia, and many other nations too.

The Drawing Database has four distinct sections:

THE BASICS –Fundamental skill building for the beginning level student.

THE FIGURE-Study of the human form in drawing for the intermediate level student.

ADVANCED ARTIST-Advanced and specialized techniques for the experienced student.

INTERVIEWS & INSIGHTS-One on one interviews with professional artists at the local, regional, and national level.

Currently, The Drawing Database has over 25,000 subscribers and is growing by 1500 subscribers monthly. I create all of the content and I have published 150 videos on the channel. All of the content and deliverables are created at NKU, School of the Arts, and the Department of Visual Art, Drawing Area. Every aspect of the influence these videos have already had and will have will be directly attributable to NKU. This offers me wonderful opportunities to share and develop student's skill sets at NKU, and at the regional, national, and international level too. It places our program and my teaching ideas across the globe and gives our department name recognition internationally. This project has created an opportunity for academic scholars to study how current technology is changing course deliverables in the studio Visual Arts. Additionally, it allows creative scholars (artists) a role model in implementing weekly and monthly video instruction as a database course log for students, alumni, etc., to work on any technique they need improvement upon for a current assignment, or any prior one. Again, to my knowledge NKU leads the way in non- profit public service instructional content for drawing in the world, via The Drawing Database.

Megan Lindsey, Counseling, Social Work and Leadership
Jessica Averitt Taylor, Counseling, Social Work and Leadership

Fuel NKU: Engaging Educational Leadership to Support Diversity in Higher Education

Food insecurity is at the very heart of community engagement, as evidenced by ongoing efforts across campuses nationwide to address food security challenges among students (Coleman-Jensen, Rabbitt, Gregory, & Singh, 2016, p.v).

This collaborative research project examines the impact of a campus food pantry on a diverse student body. Social work students at the Doctoral, graduate, and undergraduate level worked with an NKU faculty member to collect data from consenting food pantry clients. This data includes snapshot information such as employment status, household income, and grade point average. Presenters will discuss the process of conducting research, the results and immediately applicable implications, and the potential impact for higher education institutions.

FUEL NKU supports the community through a variety of active engagement efforts. These efforts include providing direct services such as food and toiletries to a diverse client base. FUEL NKU, often acting as a liaison between pantry clients and academic affairs, is thereby an ideal environment for action research.

This transdisciplinary student research team developed an initial survey tool. The primary purpose of the tool was to identify the needs of the food pantry clients and provide information in the area of retention which may ultimately be used by NKU stakeholders.

This was achieved through the inclusion of two types of questions. First, the pantry clients recorded personal demographic information such as grade point average, program involvement, and access to community resources. Second, the pantry clients were asked to share critical dialogue about their struggles, and the impact of food insecurity and the food pantry with regards to their experiences at NKU.

This participatory research approach empowered clients to contextualize how the food pantry can better serve their needs and how it has impacted their ability to successfully navigate higher education. The study and results provided better understanding of student access to resources, student financial status, and the current needs of pantry clients. Students also provided a deeper insight into their struggles, as well as their involvement with the university and the community. All of the FUEL NKU clients shared statements regarding the positive impact of the food pantry on their academic success.

Attendees will be able to discuss development and implementation of campus food pantry research project that corresponds with innovative support of a diverse student population. In addition, attendees will be able to discuss development and implementation of a client survey.

Finally, attendees will be able to describe innovative opportunities to integrate research findings with innovative program design and educational partnership models to inspire future work.

Food Security, Food Justice, Educational Leadership, Diversity



Unusual Punishment: The Federal Death Penalty in Non-Death-Penalty States

Lurking in the debate over the death penalty lies an issue that has received little attention in the public mind: the federal death penalty in non-death-penalty States. Read any newspaper article about Boston Marathon bomber Dzhokhar Tsarnaev, for example, and, buried toward the end of the piece, it will briefly remind the reader that although Massachusetts has no death penalty, the defendant is subject to execution because he committed a federal crime. One could conclude that imposition of the federal death penalty in such circumstances is both typical and non-controversial.

But one would be wrong. Until 1993, federal capital charges for crimes in non-death States were exceedingly rare. From the founding of the Republic until 2002, it appears that only a single person was ever sentenced to death by the federal government for criminal conduct occurring in a State that did not authorize the death penalty for the same offense. However, in the last twenty-five years, the federal government has sought the death penalty dozens of times in non-death-penalty States. Since 2002, eleven people have been sentenced to death in such cases. In a little over a year in office, Attorney General Jeff Sessions has approved federal capital prosecutions in four more such cases, with more almost certainly to come.

In my scholarship, I have developed a strong originalist claim that this practice violates the Cruel and Unusual Punishments Clause of the Eighth Amendment. The Anti-Federalists, those who demanded that the Bill of Rights be added to the Constitution, were concerned not only with granting individual rights but with preserving the States as the guarantors of those rights. They did this by calibrating federal rights to state law, demanding that the federal government, in at least some areas, observe the rights of the people guaranteed by each respective State. Thus, the Bill of Rights is heavily inflected with federalism (“states’ rights”) in a way that conventional constitutional doctrine fails to account for. Seen in this way, for example, the terms “unreasonable searches and seizures” in the Fourth Amendment, “due process of law” in the Fifth, and “cruel and unusual punishments” in the Eighth each call for the use of state law as a benchmark for federal rights. If so, then the Cruel and Unusual Punishments Clause preserves the authority of each State to establish the outer bounds of punishment for crimes committed in that State. This view of the Clause is bolstered by the state-specific use of the phrase “cruel or unusual” in some state legislation in the 1780s.

Some federal capital defendants in non-death-penalty States have raised constitutional objections in their cases based on my research, and I have submitted amicus curiae (“friend of the court”) briefs in some cases. Unfortunately, this position has not yet been adopted at the trial court level. However, these cases, including the Tsarnaev case, continue to wend their way through the federal courts and I plan to continue to press this constitutional objection to the federal death penalty in non-death States.

Constitutional Law, Eighth Amendment, Cruel and Unusual Punishment, Death Penalty, Capital Punishment, Federalism



How Emerging Concerns About Field Sobriety Testing May Help Us Understand the Abuse Potential of Alcohol

Americans are struggling with substance use disorders more than ever before. For alcohol use, comparisons of nationally representative survey data from 2001 to 2012 indicated that U.S. adults have increased both risky drinking and rates of alcohol use disorders (Grant et al., 2017). These increases in drinking have paralleled the increases in opioid-related deaths that have become a public health crisis (Brady et al., 2016). The purpose of this talk is to highlight how results from Dr. Marczinski's lab in the Department of Psychological Science can help us better understand why people abuse alcohol and other drugs of abuse.

The human and animal literature demonstrates that the acute administration of alcohol reliably impairs the ability to balance without swaying when standing (Zoethout et al., 2012). Since alcohol-induced increases in body sway contribute to feelings of instability when walking, motor impairments that are experienced after drinking alcohol appear to provide social drinkers with feedback that may contribute to their perceptions of their impairment. For example, the results from a field study revealed that subjective intoxication ratings given by bar patrons were better predicted by motor impairment and not by cognitive impairment, after controlling for current breath alcohol concentration (Celio et al., 2014). In essence, motor impairment (or lack thereof) may indicate intoxication levels. An individual feeling imbalanced while standing or walking may be more likely to self-assess impairment. Also, external assessments of alcohol intoxication heavily emphasize observable motor impairment. The standardized field sobriety test used by police requires an individual to stand on one leg or walk a straight line to detect possible alcohol impairment. A bartender may assess that a patron should no longer be served alcohol after observing the inability to stand up without assistance. Given that we (individually and as a society) rely so heavily on motor impairment to detect intoxication, it is interesting that little is known about the impact of stimulant drugs on prototypical alcohol-induced gross motor impairment. This talk describes findings from two separate 2018 publications from Dr. Marczinski's lab on the combined effects of alcohol and energy drinks on body sway and other objective and subjective measures relevant to understanding impaired driving. By finding some flaws with the standardized field sobriety tests, she will also highlight how the data actually give us greater understanding about the abuse potential of alcohol. Given that consumers of alcohol mixed with energy drinks (or other stimulant drugs) are more likely to drive while impaired and receive a diagnosis of a substance use disorder when compared to alcohol alone consumers, studying drugs in combination rather than in isolation may be key in improving our understanding of the development of substance use disorders.

This research was funded by National Institutes of Health grants from the National Institute on Alcohol Abuse and Alcoholism and the Kentucky Biomedical Research Infrastructure Network.

Substance Abuse, Alcohol, Field Sobriety Tests, Laboratory Studies

Becky Meadows, English

Garden of Eden

"Garden of Eden" is a piece of flash fiction that, through creative imagery, illustrates one of the first steps in a young woman's transition from youth to young adulthood. It also highlights the young woman's place on the farm on which she was reared by her grandparents, as well as the socio-economic class of the family. This piece is part of a work in progress defining the powerful women in the author's family. This piece is 428 words and was published in *The Jefferson Review* for the Spring 2018 semester.

"Garden of Eden," Flash Fiction, Feminism



Development of Novel Vaccines for Hepatitis C

The overall goal of this project is to develop novel hepatitis C virus vaccines. Our current work focuses on the testing of various vaccine delivery agents to determine which formulation is most effective in generating an immune response. Experimental vaccine formulations will be evaluated using human cell culture and animal models. When complete, results of this project will show which formulation is optimal for generating an immune response to the vaccine. While the initial vaccine target is hepatitis C virus, genes from any other infectious agent could be built into the vaccine vector and used to generate protective immunity to that agent. Potential collaborations with other academic and corporate groups involved in vaccine formulation are currently being explored. This project will generate novel immunogenicity data that may be publishable in peer-reviewed journals, and allow solicitation of federal (NIH) grant support for continued refinement of the delivery formulation.

Hepatitis C virus (HCV) is a prevalent and deadly blood-borne pathogen. An approved vaccine is not yet available for preventing infection by HCV. Our novel HCV vaccines are based on state-of-the-art, genetically-engineered DNA molecules. The DNA can be used either alone (as naked DNA) or with other delivery agents as a vaccine. When transferred into human packaging cell lines, the DNA molecules are “packaged” as viral vectors. Essentially, a viral outer shell (composed of lipids and proteins) is formed around the DNA, that protects the DNA and helps transfer it into new cells. Once the vaccine DNA gains entrance to host cells, the genes expressing the vaccine targets are turned on and the vaccine proteins are expressed. In this way, the host cell becomes the vaccine factory which produces the vaccine target from within the body. These “self-expressed” vaccines are usually better at generating protective immunity than vaccines made outside of the body and injected as extracellular proteins or carbohydrates.

Our preliminary results in human dendritic cell cultures demonstrated that when the vaccines are packaged in a protein/lipid (virion) shell, they are able to activate the cells to express chemokines and cytokines that would attract and activate protective HCV-specific immunity. Our preliminary results in animal (mouse) models demonstrated that the vaccines are capable of generating HCV-specific T and B cell responses, which are the mileposts of an effective vaccine. Additional animal and human cell-based studies are ongoing to confirm and expand this data.

Publications detailing the construction and initial characterization of these novel HCV vaccines are in preparation. It is anticipated that the data from this project will be used in publications targeted to vaccine and/or immunology journals. Data from this project will also be valuable for subsequent NIH grant submissions centered on designing novel vaccines for urgent public health targets. As a flexible vaccine platform system, genes from other infectious disease agents, such as human immunodeficiency virus (HIV), could easily be inserted into this delivery system to quickly make potentially life-saving vaccines.

Hepatitis C Virus, Experimental Vaccine, Antiviral Immunity

Thirty Years of Change in a Upper Elevation Village in West-Central Nepal

In early 2016 I returned to the village in west central Nepal where 30 years earlier I had done my PhD fieldwork. In 1986 the village was a three day walk from the nearest road, so people supplied virtually all their food and other resources from their 80 kms² of fields and forests. My research described their complex three-year farming rotation and measured the forest products they used to feed livestock and obtain the building materials, fuelwood, foods, medicines, and other materials they needed to eke out a life from the steep, low productivity environment. My 2016 trip was to identify the social, economic, and cultural changes that had developed. The village is still in its beautiful setting, but the changes are many. In 1986 the main activities of the families was to grow food to feed themselves. With inconceivable amounts of hand labor they had carved the steep landscape into level terraces on which they grew summer crops of maize and millet and winter crops of barley and wheat. The 61 named fields are scattered through the landscape, with most an hour's walk in 3 directions from the village, so to fertilize the fields they took large livestock herds onto harvested fields, held them there for one to three weeks, and planted crops after the herds moved to other fields. When all were planted, the animals were taken into the forests, where they browsed the vegetation and ate fodder the herders cut from the evergreen, broadleaf trees. Families had many children to help with the work, but child mortality was high and the nearest medical care a day's walk away. This ethnic group was recruited by the British army for their Gurkha brigades, and a quarter of the 270 households had retired or active servicemen. These men realized the need for education and had opened an elementary and high school at which many boys and a few girls studied.

By 2016 life in the village had changed dramatically: a hydro-electric plant provides reliable electricity; clean water is widely available; 80% of the households have outhouses; a demographic transition is well underway. The most striking changes are female education and child mortality: in 1986 75% of females had no education, but in 2016 93% are or have attended school and equal boys in their educational accomplishments; child mortality for boys and girls has fallen 75%! These changes are primarily due to money remitted from the half of the men between 20 and 40 who are working in the oil countries of the Arabian Peninsula. In addition, the road with its foodstuffs and goods are only a day's walk away. People are abandoning agriculture: they only plant half their land, 2/3rds of the households have no plowing oxen, adult cows, or adult water buffalo. The village has become an appendage of the oil economies of the Persian Gulf: they have traded their tenuous self-sufficiency for a tenuous dependency on the global economy. They have joined our world with all its uncertainty.

Nepal, Subsistence Agriculture, Economic Change, Remittances, Health, Education

The Art of Being an Artist

I'm lucky. The creative spirit burns inside of me and I've designed a life that allows me to feed this fire. What does it mean to be an artist or to lead a creative life? My presentation will demonstrate a behind-the-scenes look into my creative process and the strategies that I employ to prepare for an art exhibition. Since starting at Northern I've always classified myself as both teacher and artist. Finding time to pursue the creative vision is often lost among the demands of the real world, but I've found ways to balance both, allowing for a more complete life.

Rather than focusing on just one creative project in my presentation, I will refer to several from the past few years that have had a broad social impact. In the past I've mounted an exhibition at a nature center, as well as exhibited paintings at national parks, to bring importance to conserving our natural spaces, great and small. I've collaborated with Dr. Robert K. Wallace from the English Department to celebrate our love for Olympic National Park with an exhibition and lectures blending my paintings with his wonderful essays about the place and my working methods. Employing NKU alumni, I've made paintings for hospitals to help patients and their families find respite while they seek treatment. Each of these projects has enriched my life, as well as the lives of those who have seen the works of art. I want the world to know that it is important to create for multiple reasons, as it nourishes our own souls in the making and it bonds us together in the shared experiences of what it is to be human.

During my presentation the audience will see the process behind my paintings, how I deal with relevant and timely issues concerning humanity, the planning that goes on behind the scenes to make an exhibition successful and, lastly, how members of the audience can employ techniques to embrace their own creative tendencies.

Creative, Exhibition, Art



Enhancing Gerontological Literacy Through Education and Advocacy

The United States will experience substantial growth in its population aged 65 and older within the next 30 years. Enhancing gerontological literacy in our students is crucial, as existing research indicates that the ways in which older adults and the aging process are viewed subsequently impact how older adults are treated. Furthermore, it is well noted that a challenge within various professions is that not enough students are specializing in gerontology (the study of aging). This research study addresses a demographic imperative and the critical need to increase the availability of professionals prepared to address the vast needs of the growing number of older adults in our society. Utilizing a transdisciplinary approach, this project obtained data from faculty and students from Colleges throughout NKU, as well as data from community stakeholders and from older adults living within the community in order to identify strategies for moving forward with effective curricular infusion of gerontology within social work education, as well as across disciplines at NKU.

The goals of this presentation are threefold: (1) To present findings from the Gerontological Pervasiveness and Curricular Infusion research study (n=456) and NKU student focus groups (n=40) that emphasize needs, barriers, and recommendations as they pertain to gerontological education; (2) To highlight NKU gerontology initiatives (through academics and community engagement) over the past two years; and (3) To provide faculty and staff with feasible educational and advocacy strategies and activities for promoting gerontological literacy in students. Strategies for reframing how longevity and aging are viewed to better prepare students for the current and future aging landscapes will be discussed, as well as ways to mitigate challenges commonly found with infusing gerontology into education. Content from this presentation will help inform faculty and staff from all disciplines at NKU about realistic and creative ways to promote gerontological literacy, through the lens of teaching, research, service, and advocacy, in order to provide cutting-edge gerontological education and resources that ultimately produce competent and proficient professionals.

Gerontological Literacy, Curricular Infusion, Reframing Aging



The ISS-CREAM and HELIX Projects at NKU

ISS-CREAM and HELIX are NASA-sponsored instruments that measure various characteristics of near light speed elementary particles and elemental nuclei from outside our solar system: cosmic rays. In contrast to the large high energy physics experiments at CERN and Fermilab, high-energy astrophysics goes into the field, so to speak. The instrumentation must be compact (about the size of a minivan) so it can be sent into space to study particles and measure their characteristics before they interact with our planet and its atmosphere. This is accomplished with either high altitude balloons launched from the wind-blown deserts of Antarctica or the wilds of Canada, or by sending instruments to the Space Station.

The results teach us details about how the cosmic rays were accelerated to such high energies, and various parameters associated with the tortuous journey through interstellar space between acceleration site (believed to be primarily supernova remnants) and Earth, such as the propagation time scale, interstellar matter density, and magnetic field strengths.

The ISS-CREAM (Cosmic Ray Energetics And Mass on the International Space Station) instrument launched to the Space Station in August 2017, and will collect data for at least three years. The instrument is about the size of a refrigerator and has a mass of 1500 kg. It is designed to measure the abundance of the different elements in cosmic rays at energies where it is thought that the acceleration mechanism in supernova remnants begins to reach its limit. Results will help work out details of that mechanism. NKU helped design and characterize a scintillation detector for ISS-CREAM which will augment the science of the project by enabling the identification of cosmic ray electrons, a rare but important component of the cosmic particle flux.

Dr. Nutter is Simulations and Analysis Lead on this project. He has built a detailed computer model of the instrument, essential in the interpretation of the data, carefully matching the response of the various detectors to beam test data taken at CERN (world's highest-energy particle accelerator in Geneva, Switzerland).

HELIX (High Energy Light Isotope eXperiment) is designed to measure the relative abundance of isotopes of beryllium in the cosmic rays at intermediate energies using a magnetic spectrometer. One of the beryllium isotopes is naturally radioactive, so is thus an important measure of time elapsed since production and acceleration. A one Tesla superconducting magnet causes through-going cosmic rays to bend in different amounts according their charge and velocity, measuring momentum. Other detectors measure particle charge and velocity, providing enough information to determine the mass (i.e. isotope) of the cosmic ray particle.

This project started in 2015 and is scheduled to launch to space on a high altitude helium balloon from Antarctica in austral summer 2019-2020. NKU responsibilities include participation in simulations and design and fabrication of the Bore Paddle (BP), a small scintillator paddle that will fit into the central region of the magnet and reduce background by providing a trigger only for particles going through the magnet bore, or center.

Cosmic Rays, NASA, Space Instrumentation, ISS

From Chaucer to ChaucAR: Engaging Students with Augmented Reality

This presentation will explore my NEH-funded digital humanities research project. The Augmented Palimpsest. In 2016, the world was introduced to the emerging technology of Augmented Reality (AR) in the form of Pokémon Go, a location-based, AR-enhanced game that became one of the most popular mobile apps of the year. My project is to design a digital humanities tool that explores how the medium of AR can be used in humanities pedagogy, specifically the teaching of medieval literature. The prototype not only provides 3D digital enhancements for the linguistic, historical, and cultural contexts of the literary work, thus giving the students greater access to medieval material culture and history, but also creates a highly immersive learning experience for students because the 3D enhancements are large and complex enough to be viewed from multiple angles. Because the enhancements emerge from the printed page, the prototype maintains a pedagogical emphasis on close reading while encouraging students to develop their skills in textual analysis, critical thinking, interdisciplinary study, and new media literacy. This hybridization of the digital with the printed text also preserves the reader's physical and kinesthetic connection to the literary work. We have created simple printed pages with a highly detailed manuscript border set around a literary text. Each page has the appearance of a medieval manuscript folio with a border that is coded with a variety of digital enhancements, including but not limited to audio, video, and graphical materials; 3D models of figures, architecture, and objects; and assessment tools, such as quizzes and writing assignments. The student opens the appropriate AR app on a smart device, such as an iPhone, iPad, or Android device, and then holds that device over individual markers embedded in the border to access the various enhancements coded to each marker. We are using The General Prologue from Geoffrey Chaucer's fourteenth-century Middle English poem, *The Canterbury Tales*, as the literary text. Chaucer's poetry is included in all standard historical anthologies of English literature and taught every semester in the undergraduate survey of early British literature in the United States. Chaucer's works are even taught in the original Middle English to high school seniors as mandated by state legislatures because exposure to the history of the English language is considered almost as valuable as exposure to Chaucer's narratives. Nevertheless, ask any instructor of the undergraduate survey of British literature, and he/she will likely tell you that students struggle significantly with reading Chaucer's works, not because the stories are unappealing but because of the language and cultural references are so unfamiliar to the typical 21st-century undergraduate. The Augmented Palimpsest provides the contexts needed for an inexperienced reader of Chaucer's poetry to understand and interpret it fully. Experiencing the AR enhancements will encourage students to return to the text in order to understand exactly what they are seeing and/or hearing. This project's use of AR is one of the first for teaching literature and encourages innovative applications of AR in the future to humanities-based research and pedagogy.

Augmented Reality, New Media, Digital Humanities, Digital Design, Reading, Pedagogy, Language, Transdisciplinary Studies, 9-12 Education, Undergraduate Education, Medieval Literature

The Japan-U.S. Collaboration on Domestic Violence Victim Advocacy Training: An Evaluation Study

Domestic violence (DV), physical and psychological abuse by one partner against the other in an intimate relationship, is considered a serious social and public health problem around the world. DV victim advocates, who assist victims in navigating complex legal and social service systems, are often social workers employed in governmental and non-governmental entities including DV shelters and courts. These advocates work with victims who present various and often urgent needs such as safety planning, obtaining housing, maintaining child custody, and staying sober. It is crucial that victim advocates understand the magnitude of issues victims face, be knowledgeable about local resources, and be skilled at dealing with ethical dilemmas. In the U.S., advocates regularly receive training provided by their non-profit state DV coalition which is tasked with assisting local victim service providers.

In Japan, since a DV law was enacted in 2001, DV cases have increased across governmental and non-governmental agencies indicating needs for advocates who can effectively assist victims. Unfortunately, the training for Japanese advocates has not been consistently provided and generally depends on individual advocates' will to seek opportunities on their own. Because of this lack, the international collaboration to provide training and support for advocates was born. In 2005, this author began training Japanese advocates based on a training which was developed by a state DV coalition in the U.S. to equip American advocates with foundational attitudes, knowledge, and skills. The training has gone through some revisions over the years to adjust to cultural specificities and now uses experienced Japanese advocates as trainers once they completed the training of trainers.

The purpose of this project is to evaluate the effectiveness of this advocacy training conducted between 2014 and 2018. Using the pre and post-tests data ($n = 166$), it is expected that there will be differences between the pre and post-test scores on training participants' stereotypical beliefs about DV, knowledge and skills, as well as confidence in carrying out their work. It is further anticipated that these are positive changes that can indicate training effectiveness.

There is a dearth of research on DV advocacy training in Japan and the U.S. The findings from this study will fill the gap of knowledge in this field and help improve advocacy efforts. In addition, because this is the first evaluation of this particular training in Japan, the findings may provide a rationale for continuing the training and for seeking funds necessary to expand and sustain the efforts. This training is part of the on-going Japan-U.S. collaboration that spans over 10 years. This model of international collaboration to meet the needs of local communities may be applied to other fields to begin a new program and sustain it for a larger impact. The presentation will encourage the researcher-practitioner collaboration in various fields and conversations about interdisciplinary and international efforts.

Domestic Violence, Training, Victim Advocacy, International Collaboration, Japan

Deborah Patten, Allied Health
Gina Fieler, Nursing

Adding Interprofessional Simulations in Course Curriculum for Nursing, Radiologic Science and Respiratory Therapy Students

Background: In 2003, the Institute of Medicine charged healthcare educators to provide students with opportunities to learn and practice patient care in a team setting. Review of literature gives strong evidence that working together as a team produces high quality, safe, and efficient patient care. Competency in interdisciplinary teams is one of the five core competencies of "Health Professions Education: A Bridge to Quality," the follow up summit to the Institute of Medicine's landmark document, Crossing the Quality Chasm, a New Health System for the 21st Century. (Institute of Medicine, Health Professions Education: A Bridge to Quality, 2003.) This study described how Interprofessional Simulation (IPE SIM) was incorporated into course curriculum for nursing, radiologic science and respiratory care students at Northern Kentucky University, College of Health Professions. NKU IRB approved this study.

Method: Led and by the College of Health Profession's Simulation Lab Facilitator, Gina Fieler, faculty from Radiologic Science, Karen Leek, and Respiratory Care, Debbie Patten, were invited by Gina to collaborate at the start of the semester to develop a patient scenario, identify student objectives, and schedule dates with times to run the IPE SIM. Nursing students who participated were enrolled in didactic classes that scheduled simulation on a regular basis. Radiologic science and respiratory care students were invited to participate in exchange for clinical practicum time. Students were invited to participate and assigned bedside caregiver or observe roles. Both caregiver and observer roles are considered active participants in the IPE SIM. The IPE SIM was scheduled to run at four distinct times near the end of the semester, allowing for greater number of participants. Faculty initiated the IPE SIM in a large group format with a short pre-brief, and then directed caregiver participants to enter the simulation lab for bedside report. The simulation scenario progressed until the predetermined objectives were met, about 15 minutes. Debrief followed for approximately 30 minutes. Evaluations were distributed to students to complete before leaving.

Results: The student feedback and evaluation tool was developed by the faculty using 5 point Likert Scale with open comment options. A total of 93 student evaluations were reviewed: 49 (53%) nursing, 27 (29%) respiratory care and 17(18%) radiologic science. In response to items on the survey, 92.5% (n=86) reported it was a worthwhile educational experience; 94.5% (n=88) either strongly agreed or agreed that it was realistic; 95.7% (n=89) agreed or strongly agreed that it was challenging; 97.8% (n=90) agreed or strongly agreed that faculty augmented learning without taking over. Comments from the two open ended questions included: "great learning", 'do it more', effective teamwork and communication', and observation of other discipline's roles." **Conclusion:** The results suggest that these IPE SIM activities for nursing, radiologic science and respiratory care students were effective and enjoyable learning opportunities to meet IPE competencies of improving teamwork, communication, mutual respect for values and ethics and learning of others roles and responsibilities.

Interprofessional Education, Respiratory Therapy Students, Simulation Based Learning

Playing with Love: Utilizing Critical Game Play to Question the Institution of Marriage

With the passage of the 1996 Defense of Marriage Act (DOMA) the United States defined marriage as the union of one man and one woman, thereby allowing states the ability to deny and refuse same-sex marriage licenses. Additionally, the act barred same-sex partners from receiving federal marriage benefits which included: insurance/survivors benefits, bankruptcy, medical visitations, etc. Nearly a decade later the United States overturned DOMA to recognize the legality of same-sex marriage as granted under the 14th Amendment. While these court cases illustrate the religious importance of marriage and the socio-political significance of civil rights, these court cases also reveal the amount of control that governing institutions have over cultural practices and, consequently, the lives of the individuals involved in these practices. The governmental control over marriage is not new but rather, another illustration of the ways that marriage is used as a tool of social regulation. For example, marriage has historically involved the selling of women for profit, the trading of daughters for property, been used as a legal justification for rape and domestic abuse, limited humans access to family services, spawned a billion-dollar slave industry around diamonds, and created the backbone for much of the American Dream. To explore the marriage-industrial complex and its historical evolution, and drawing from theories of critical play (Frasca, 2007; Flanagan, 2009; McGonigal, 2011), this project utilizes serious games to actively question the taken for granted or seemingly "natural" social institutions that individuals participate in every day.

Following Bogost's (2007) use of procedural rhetoric and Flanagan's (2009) argument for games as tools for social change, this project created a serious game to analyze the institution of marriage. Through a series of eras (each designed to elicit a different experience) individuals play a selected set of cards (crafted from historical research on the familial, financial, institutional and traditional structures surrounding marriage) as they try to earn the most points possible. The goal of this project is to take a critical look at the institution of marriage; its role in society, and the implications that it has for (non)participating members, and by extension, the other seemingly "natural" social practices (i.e. banking, education, social media surveillance, etc.) that individuals participate in.

Intended for use in a classroom, the game encourages participants to question their interactions, the cards, and the experiences of each era. To help compliment the analysis there is an extended description of the cards (and their historical grounding) at the end of the rule book. The project is currently submitted to the 2018 international academic conference on meaningful play, hosted by Michigan State University.

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Critical Play, Marriage, Critical Thinking, Game Design

Empowerment, Manipulation and the Double-Edged Sword of Direct Democracy

Direct democracy typically is lauded for putting power in the hands of the people. But is it really as democratic as it seems? This purpose of this presentation is to explore to what extent, and in what circumstances, are these mechanisms less about citizen power and more about external influences seeking to manipulate outcomes? Addressing these issues, I will draw on and compares case studies of referendums, recall elections, and initiatives in the United States and around the world to investigate the complex realities of direct democracy in action. This is a unique approach to the study of direct democracy and examining the impact across the mechanisms as well as on a global scale and a unique contribution to the political science literature. Direct democracy, an electoral sub-type, allow citizens to have more input at the ballot box through initiatives, referendums and recalls. The questions posed on the ballot can be proposed by voters or the legislature. Recalls allow for voters to remove elected officials before the end of their term. These elections are intended to engage voters and even keep legislators in check. They are hugely powerful tools: they can used to both empower citizens but also as a façade of democracy and a tool of manipulation. The United States has used direct democracy since the early 1900s and the early uses of these were to involve citizens in the policy making process. These mechanisms have allowed citizens to make long-term policy decisions on topics from taxes to marriage and given them more control over their government. However, this system has also been co-opted by large interests with money to promote their agendas. The language that is used (and will be illustrated during the presentation), is often far beyond the comprehension of the average voters and worded in a way to confuse and obfuscate the issue. Further, the use of recall in California and Wisconsin at the gubernatorial level had mixed results. California removed a long serving political official with an actor who had name recognition; while Wisconsin's failed attempt to recall their governor resulted in few checks and balances in policy-making. The use of direct democracy to enhance citizen power in the democratic system. Beyond the United States, these mechanisms are used around the world to empower and manipulate voters. As will be demonstrated in this presentation, it has been used to support regimes in Central Asia, create citizen governing in Europe and Southeast Asia, and prop up corrupt regimes in Latin America and Asia. Here language plays a pivotal role as well; how we word ballot questions often influences the results we gain. The challenge does not appear to be geography (as the challenges permeates globally) but the mechanism and how they are used. This analysis looks to challenge our notion of what is democratic in a time when democratic ideals are often taunted. This will give hope to the power of the people but also create cynicism in the motives of direct democracy.

Democracy, Elections, Manipulation, Voting, Empowerment, Direct Democracy



Pathways to a Nursing Degree

The RN workforce is projected to grow from 2.71 million in 2012 to 3.24 million in 2022, creating a 19% increase in the need for nurses. As the demand for nurses increases, the profession of nursing must employ innovative approaches to foster an interest in a nursing career.

In response to the national healthcare mandate, the program Pathways to Nursing (PTN) was started in 2006. The PTN was an innovative partnership between the area healthcare agencies, county schools, and the regional university to expose high school students to the profession of nursing. In 2009 the program was expanded to include middle school students and renamed Pathways to a Nursing Degree (PTND). The expanded program included two unique learning opportunities: (a) Nurse Summer Camp for high school students, and (b) Nurse Career Day for middle school students. Currently, the program is a partnership between a Northern Kentucky University and St Elizabeth Healthcare.

Summer camp high school participants spend two days on the university campus, including an overnight in the dorms and an additional two days in shadowing experiences with registered nurses in a myriad of specialties throughout the medical center. While the high school students are on campus they engage in a variety of nursing related activities, and a “meet and greet” with academic advisors about the requirements for the baccalaureate nursing program.

A second educational component was created for 6th, 7th and 8th graders entitled Nurse Career Day. This component provides middle school students a one day on campus exposure to the profession of nursing. The PTND program partnered with area middle schools demonstrating 50 percent or greater student population on free or reduced lunch to bring middle school students to campus for a Nurse Career Day.

Since 2009 the PTND program has had contact with 250 high school students through Summer Camp and 89 middle school students through Nurse Career Days. For both middle and high school students the number one reason for what influences their interest in a career in nursing is attending PTND camp or career days. The second highest category for influencing their interest in nursing is their parents and the third, which is meaningful from a health provider stand point, is a "health issue that either you or someone else has dealt with".

Of those students completing the exit survey, both middle and high school students indicate they plan to attend a four-year college. High school students identified money as an obstacle to higher education. The middle school students did not identify any obstacles for attending college. Because middle school students did not identify any obstacles, this becomes a pivotal time for college and career planning.

The Pathways to a Nursing Degree program is the focus of a longitudinal study which is investigating the impact of the program on the selection of a nursing or healthcare career by those students who have attended this program. Longitudinal data collection began in the Spring of 2015. Program evaluation data supports the continuation of this unique opportunity.

Nursing, Partnership, High School, Middle School, Camp



Learning Organic Chemistry Mechanisms Through Dance

Ask almost any student who has taken the class and they will tell you organic chemistry is one of the most difficult courses in college. One cornerstone of organic chemistry is learning reaction mechanisms, the step-by-step description of exactly how one molecule is converted into another. Unfortunately, mechanisms are also the largest hurdle for many students. While each mechanism is usually presented class in a traditional manner, with chemical structures written out on a whiteboard, not all students easily learn this kind of material through rote memorization. Some students respond better to other visual representations or kinesthetic learning. To this end, a transdisciplinary collaboration has been established between the Department of Chemistry and Biochemistry and the Department of Theater and Dance to create videos where dancers emulate organic chemistry mechanisms. To date, no other videos of this kind are known. We have recorded more than 15 different mechanisms that are currently being edited to present in class and be available to students in the fall of 2018. We are also exploring ways to engage chemistry students in a kinesthetic manner. We intend to bring dancers into the classroom to guide organic chemistry students participating in various mechanism “dances.” These videos and exercises should foster greater student-student interactions, improve student learning outcomes, and enhance the pedagogy within chemistry. We expect to share our results with both chemical and dance education journals. The products of this collaboration are also appropriate for outreach to the non-scientific community at any age, offering a glimpse of complicated chemical processes through entertaining means.

Below is the chemist’s representation of the mechanism for a chemical reaction. The large black circles represent carbon atoms and the lines between the various atoms represent the bonds holding the atoms together. The colors match those used by the dancers (hydrogen = grey; chlorine = blue; carbon = black). First, the mechanism shows the carbon-carbon double bond being used to form a new bond to hydrogen while the bond between hydrogen and chlorine breaks. A new species is formed, an intermediate, where the carbon on the left has the same total number of bonds, but both the carbon to the right and the chlorine are missing a bond. In the second step, the chlorine adds to the carbon so that both have the right number of bonds.

The same mechanism can be interpreted though dance. Each dancer represents an atom and they use their arms and legs to connect to each other, indicating the bonds between atoms.

If selected, the presentation would involve a discussion of project development, sample videos used in class, pictures or videos of chemistry student participation, and live dancers performing selected mechanisms. This work should ignite the creativity of others to develop artistic representations of what might otherwise be viewed as complicated material. This project has already had an impact on the dancers involved. Not only have they developed a growing interest in organic chemistry, but also in combining dance with other non-arts related studies.

Organic Chemistry, Mechanism, Dance, Video, Kinesthetic Learning, Transdisciplinary

Understanding Creative Placemaking as Political Phenomena

American democracy has persisted and deepened over time as an exercise in popular sovereignty, liberty, and effective rule of law. Central to democracy is civic engagement. Forms of civic engagement are constantly evolving, and this is particularly true in the age of the Internet where traditional civic associations are changing and virtual engagement is booming. Creative placemaking is a contemporary form of civic engagement that impacts community development by building social capital, motivating public policy, and shaping development. Scholarship focused on the political realities of placemaking is nascent but growing. This project seeks to elucidate the political implications of creative placemaking, exploring everything from the competing definitions of placemaking to the role of institutions in placemaking events to the implications of a new approach to democracy called localism. The ultimate goal is to be able to assess the democratic nature of creative placemaking, employing the insights of individuals who engage in placemaking in addition to the scholars and experts who are focused on that and other, similar topics. Begun in summer 2016, dozens of individuals involved with placemaking have been interviewed and a survey was conducted with over 100 respondents associated with institutions that regularly engage in placemaking. As the interviews continue this summer, the pieces of the project are coming together to provide a sweeping analysis of creative placemaking in a socio-political context. The emerging clarity is exciting for its transdisciplinary applicability (most notably for visual artists, public administrators, nonprofit directors, educators, politicians, etc.) and potential implications American democracy writ large. Is creative placemaking a form of civil society similar to traditional civil society or is it something unique to the 21st century? This project seeks the answer to that question and embraces other conclusions uncovered along the way.

Creative Placemaking, Democracy, Civil Society, Interviews



Strategic Depaving in Newport's Urban Core for Community and Environment

Strategic Depaving (SD) is an ongoing research project that brings together NKU students, faculty, and staff with area stakeholders and community members to transform vacant lots in Newport, KY into public greenspace. The main environmental outcome of SD is improved water quality through collaborative and active participation in the conservation of regional water resources. Pavement intensifies stormwater runoff which negatively impacts water quality. This is especially problematic in areas with combined sewer systems, where stormwater and wastewater are combined. Large storm events can strain pipes and result in discharges of raw sewage into waterways. In the Cincinnati metropolitan area alone, an estimated 11.5 billion gallons of mixed stormwater and raw sewage are released into rivers and streams annually. Replacing pavement with vegetation promotes infiltration and storage of stormwater. For this reason, as well as additional benefits of vegetation, increasing greenspace is a focus of both urban stormwater management and urban sustainability planning.

There are two central themes to Strategic Depaving – community engagement and transdisciplinarity. Community engagement has been a focus of this project from its development stage, as its beginnings sprang from a community survey we conducted that identified water quality and access to greenspace as high priority concerns of the neighborhood. Community engagement will continue throughout the project, including the use of a popular urban planning tool, community design charrettes (i.e. community workshops focused on planning), to solicit feedback on the placement, design, and use of the new public greenspace. NKU participants represent a diverse group of disciplines including biology, electronic media and broadcasting, english, environmental science, fine arts, geology, history and geography, journalism, nursing, and visual communication and design. NKU's CINSAM and the Scripps Howard Center for Civic Engagement are also involved in the project. Community partners include area non-profits, local government, neighborhood associations, local businesses, and individual community members. Our work is centered in the Buena Vista neighborhood, an underserved neighborhood in the Licking River Watershed.

We anticipate important community outcomes from this project. Specifically, through engaging the Newport, KY community in decision making and design we aim to advance environmental education regarding the contributions that greenspace makes to improved water quality. The community design charrettes are not only an opportunity for stakeholders to learn about, design, and build greenspace – they are also an opportunity to evaluate whether sustained community engagement in environmental decision making promotes a community's sense of agency and stewardship. In this vein, SD is as much about the process of community-engaged research as it is about the anticipated products.

Strategic Depaving contributes to the field of environmental science by addressing a critical gap regarding the long-term sustainability of urban watershed management – the role of community engagement in shaping and creating solutions to protecting urban water resources. By addressing this gap at the neighborhood scale, SD contributes to regional water quality and greenspace efforts. In addition, Strategic Depaving aims to establish a model for how to navigate community-engaged transdisciplinary research at NKU, including mentoring NKU students in use-inspired, community-engaged environmental research.

Community Engagement, Environmental Science, Water Quality, Social-Ecological Systems

Occupational Exposure to Diesel Particulate Matter in Underground Mines

Elevated exposure to diesel particulate matter (DPM) has been linked to adverse health outcomes including respiratory irritation, cardiovascular disease, immune dysfunction, and lung cancer. Due to the nature of their work in confined spaces and in close proximity to diesel powered equipment, underground miners experience amongst the highest exposures to DPM of any occupation. The overall goal of this research is to use realtime and time-integrated sampling methods to evaluate environmental and occupational exposure to DPM in an underground metal mine. Using underground miners placed in high, medium, and low exposure categories and results of environmental monitoring, correlations between DPM measurements acquired using MSHA-approved methods and realtime measurements of diesel exhaust combustion byproducts were determined. Co-location of DPM impactors with realtime monitors allowed for regression analysis between measurements. Samples collected using DPM impactors were subjected to analytical methods that determined the elemental carbon (EC) and organic carbon (OC) fractions of total carbon (TC). The resulting data provides important information related to using the EC fraction to estimate TC in the presence of airborne carbon interferences. Regression analysis of results from environmental monitoring suggest fair to poor correlations between realtime measurements of particle concentration and NO₂ and measurements of TC (R² values of 0.75 and 0.076, respectively). Concentration results of personal exposures to TC generally followed a miner's low, medium, or high exposure category and ranged from 21µg/m³ to 132µg/m³ with an average of 55µg/m³ (SD = 22µg/m³). With respect to miner exposure categories, acquired EC/TC concentration ratios ranged from 2.4 to 7.9 with an average of 3.9 (SD = 3.8). Study results suggest that there is a fair correlation between realtime measurements of particle concentration and TC, but that similar realtime measurements of NO₂ serve as poor surrogates for this MSHA compliance measure. Personal exposure measurements of DPM were below MSHA compliance thresholds validating the use of appropriate ventilation and diesel powered equipment controls. Large OC fractions in DPM samples are unexplained and appear to indicate the presence of interferences in the ambient air of the underground environment.

Diesel Particulate Matter, Elemental Carbon, Total Carbon, Lung Cancer, NO₂, Surrogate Measure



Making Media for Startup Businesses in the Westlake Township of Cape Town

This service learning scholarship project, part of a May 2018 study abroad class, will create video profiles for ten startup businesses in the Westlake township area of Cape Town, South Africa. These profiles will be used as fundraising and marketing tools as the startup entrepreneurs work to develop into successful business owners.

This project has distinct outcomes for three different audiences. Foremost, the videos created by our NKU students will directly benefit the entrepreneurs and their township as they start businesses in one of Cape Town's more disadvantaged areas. Our partner, a non-governmental organization, New Leaf, gains resources and expertise to assist their clients while also giving opportunities for engaged learning to current students at NKU, one of the founders' alma mater. And our students earn practical experience working with clients in a collaborative supervised-yet-challenging environment.

This project, like other similar projects we commonly undertake, contributes to the development of our discipline primarily through solving practical challenges for the stories being told. For example, one startup focuses upon recycling and requires the viewer to visualize the repurposing of land on the edge of the township. This will be accomplished by integrating Google maps with footage shot in the township. Another challenges the students to showcase a clothing store being run out of the owner's one room shack, with garments and shoes displayed on her bed. These practical details are then also impacted by cultural expectations and norms, aspects that help to widen our students' worldview.

But the greatest impact will be on the Westlake township community. The ten startup businesses, as they meet a variety of needs in the community, will improve the quality of life for the many thousands of residents in the impoverished area. One of the exciting aspects to this project is the wide variety of businesses the videos will support. There are two restaurants, one being run out of a shipping container and another attached to the owner's home. A bicycle repair shop, a perfume maker, a woodworking craftsman, and an upholstery repair specialist are a few of the other businesses that our work will benefit.

Projects like ours can serve as a model for future collaborations. While this project featured students from the Electronic Media and Broadcasting and Theatre programs, with the right domestic or international partners many academic program pairings could positively impact the daily life of communities locally, or worldwide. When we take on media projects we collaborate with experts and individuals deeply connected with issues and their communities. We provide the faculty member's expertise and combine it with the students' growing skill set in order to effectively craft a message. Our students are able to make a distinct difference in the lives of some people living in situations very different from their experiences while avoiding a "first world savior" complex of trying to fix or solve problems from the outside, but instead are connecting with others through collaboration on many levels as we work together.

Media, Service Learning, Engagement, Collaboration, Video, Interview

Development of a Novel Modular Integrated Stackable Layer - Analog System Environment (MISL - ASE) Platform for Embedded Systems Design

Over the last decade, the rapid advancement of computer, sensor, communication, data storage, and IC technologies has had a tremendous impact on embedded system design in many different types of industries. For example, Bluetooth has emerged as a standard inter-device communication protocol in embedded systems. Traditional data measurement methods are being steadily replaced by one-wire communication technology for numerous embedded systems. Thus, there is an acute need to integrate new and relevant devices and technologies into current embedded system teaching and learning processes. Moreover, design and implementation of embedded systems requires a broad knowledge in the areas of analog electronics, digital interfacing, communications, real-time operating systems, and software development, which are not traditionally covered in any one discipline. As faculty members, we often observe limitations in student performance when integrating multiple engineering concepts into an embedded system. Thus, it is very important to establish an integration platform that can incorporate recent advances in development tools and design methodologies, as well as the knowledge gained from different disciplines to develop practical new design techniques, so students may easily apply those new techniques to the design of state-of-art and real-time embedded systems.

Unfortunately, none of the existing development platforms/boards are able to meet typical academic needs. With the funding support of Texas Instruments and NASA, a novel Modular Integrated Stackable Layer - Analog System Environment (MISL - ASE) platform has been developed for two embedded system design courses and capstone design in the Engineering Technology (EGT) program at Northern Kentucky University. The MISL-ASE platform: 1) provides a comprehensive educational hardware environment to support embedded hardware and software design, development, and test; 2) supports laboratory-based experiential learning in digital/analog interfacing and wired & wireless communications; 3) gives students the opportunity to design embedded systems using TI advanced microcontroller technology and a wide range of new analog and communication devices; and 4) helps students learn and use the NASA-designed, space qualified MISL architecture and assemble their own MISL stacks, e.g., power layer, intelligence layer, sensor layer, communications layer, and actuator layer, etc.

Embedded Systems; Microcontroller; Intelligent Product Design; Communication

David Tataw, Allied Health
Olugbemiga Ekundayo, Allied Health

Improving Regional Health Through Collaboration and Partnership. Mid-cycle Outcomes Evaluation of the Northern Kentucky Community Health Improvement Plan

The purpose of this project is to evaluate and report the impact of the Northern Kentucky Health Improvement Plan on the health of the people of Northern Kentucky as evidenced by improvements in good nutrition, active living, tobacco free living, health care coverage, behavioral health, health workforce transformation and alignment of advocacy agendas. We also present information on the characteristics and quality of collaboration and partnership relationships of the Northern Kentucky Health Partners who came together to assess the health status of the Northern Kentucky region and to implement strategies that would drive the region towards improvements in the health and social outcome areas identified above.

The Northern Kentucky Health Partners are a network of organizations from diverse backgrounds and community roles including businesses, chambers of commerce, municipal government, universities, health care providers, non-profit organizations, grassroots advocacy groups to name a few. Northern Kentucky University was a chartered member of the Community Health Improvement Plan and sat in as steering committee member as well as the leader of the process and outcomes evaluation. This paper focuses on outcomes data.

Participation in this project is an example of the university's commitment to improving the health of Northern Kentucky. This project is also a demonstration of the university's determination to recognize and influence social determinants as it engages with other stakeholders to improve regional health through population health strategies.

Faculty and students have benefitted from this project and could benefit more.

Faculty carried out research and service while students used the data in part of their projects for graduate education related practicum. Some of the outcomes are expected to be the use of these projects to enhance student experience of existing courses in health professions, informatics, business and law.

We present both qualitative and quantitative outcomes data.

Evaluation Research, Community Health, Population Health, Collaboration, Partnerships, Population Health Interventions

Stephen Variames, Music

Leaving Vaughan Behind

According to the World Health Organization, 450 million people globally suffer from a mental illness. In America alone, 16.1 million people suffer from Major Depressive Disorder, while 18.1 people have anxiety disorders. With those numbers so high, anxiety and depression still carry a stigma. Through personal experience and teaching students that have shown signs of depression, I came to realize how wide spread this illness is and decided to write a piece that explores depression from a different angle.

This project is a one-act opera titled Leaving Vaughan Behind; it explores the lead character's (Jonathan) day to day actions from the perspective of his oldest friend (Melissa) and lover (Vaughan). Jonathan is an aspiring poet who suffers from panic attacks, and Vaughan only wants to help Jonathan cope. When left alone at the end of the piece, Jonathan receives a negative decision from a publisher. Having no one around, he spirals, and the audience finally sees what it's like to be inside the mind of one dealing with this illness. I drew from my own dealings with my depression to write the libretto (similar to a script). The piece is accompanied by a piano quintet--which includes a string quartet and one piano--creating an intimate and welcoming environment.

I am hoping to perform the piece in January, with a question and answer session led by a professional psychologist. Through this performance, I would like to accomplish two goals. First, I hope to bring solace to those dealing with depression; and I hope to raise an understanding of those without the illness. Second, I hope to potentially begin a small opera company that commissions composers to write operas dealing with a social issue. After every performance, there would be the same question and answer with a professional on said topic of the opera.

Opera, Depression, Chamber, Community

Monica Wakefield, Sociology, Anthropology and Philosophy
Alexana J Hickmott, University of Oregon, Anthropology
Colin M. Brand, University Of Oregon, Anthropology
Ian Y. Takaoka, NKU Undergraduate Alumnus, Sociology, Anthropology and Philosophy
Michel T. Waller, Central Oregon Community College, Cultures and World Languages
Frances J. White, University Of Oregon, Anthropology

**Meat Eating and Meat Sharing Among Wild Bonobos:
New Insights from the Iyema Site, Lomako Forest, DRC**

Chimpanzees (*Pan troglodytes*) and their lesser known cousins, the bonobos (*Pan paniscus*) share the distinction of being human's closest living relative. Therefore, the behavior of these animals provides an important framework for referential and comparative models for the evolution of behavior in our own lineage. One such model posits that hunting and food sharing played a fundamental role in the evolution of cooperation in humans. Chimpanzees and bonobos are primarily frugivorous, however given the opportunity both species will hunt and consume a variety of vertebrate prey. When consuming larger prey items, they will share meat with members of their social unit. Until relatively recently, direct observations of this behavior remained rare in bonobos, especially compared to chimpanzees, suggesting that bonobos consumed meat less frequently than chimpanzees. Thus, most models of the evolution of hunting and cooperation via food sharing in *Homo* have focused heavily on chimpanzees.

Here, we report the first observations of meat eating and sharing among semi-habituated bonobos at Iyema, Lomako Forest, DRC. We observed bonobos at Iyema for five months from June through October 2017. We observed bonobos consume duiker meat on three occasions, found a duiker carcass post consumption, and observed duiker hair in one bonobo fecal sample. We identified the prey species as Weyn's duiker (*Cephalophus weynsi*) for the three observed events and the discovered carcass. Meat sharing was observed or inferred during all three direct observations. However, the individual controlling the carcass (adult females for two events and an adult male for one) frequently resisted, sometimes aggressively. These data indicate that bonobos at Iyema consume meat at a much higher rate than previously reported for other Lomako bonobo populations. The conservative rate based on direct observation (0.6 events/month) is among the highest documented for bonobos and falls within the range of variation documented across chimpanzee populations. Additionally, bonobos at Iyema may be targeting a specific prey species. Prey specificity has also been documented at other bonobo sites. This lends support to the hypothesis that prey preferences may represent cultural variation in bonobos.

This report highlights the need to consider hunting and meat eating behavior in bonobos, not just chimpanzees, in developing models of the evolution of hunting and food sharing. While there are similarities in this behavior between the two species, there are important differences, such as differences in sex-biased control and access to meat. This report contributes to our limited, yet growing understanding of meat consumption and sharing among wild bonobos.

Bonobos, Human Evolution, Meat-Eating, Food-Sharing, Culture

Hongmei Wang, Computer Science
Spencer Taylor, Computer Science
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Margaret Minzner, Great Parks of Hamilton County, Ohio
Ben Braeutigam, Great Parks of Hamilton County, Ohio
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Mapping Honeysuckle Spatial Distribution by Using Remote Sensing Techniques

Today a big natural resource challenge for many parks and nature preserves in the United States is to manage a non-native tall shrub named Amur honeysuckle. In-situ surveys are impractical to map honeysuckle distributions in large forest areas because of limited staff time and extensive labor costs. The major research objective of this study is to explore how to map honeysuckle distribution by using remote sensing techniques. The test field is located in Great Parks of Hamilton County, Ohio. Field data about honeysuckle density in the study area were collected in 2013. A World-View2 satellite image (with 2 meter resolution) acquired on Nov. 9th 2013 was classified into several land use types, including low density honeysuckle area, medium-high density honeysuckle area, grass, bare soil/construction, and water/wet land. The field data and aerial photos (with 4 inch resolution) of honeysuckle distribution in the study area were used to validate the classification results. The study result demonstrates that the World-View2 image delineates honeysuckle distribution fairly well, in particular, for medium/high density honeysuckle areas. The result can help the managers of local parks/natural preserve areas to keep track of honeysuckle distribution and plan treatment activities.

Honeysuckle, Remote Sensing, High-resolution, Satellite Images, Classification



You Make Me Smile

Did you know that you can actually feel happier by smiling at yourself in a mirror? It's true. But, even better is when someone else smiles at you. You cannot help yourself and smile back. Human evolution has given us a mechanism called mirror neurons that make us smile when we see others smiling. And when we smile, we get a shot of endorphins. So, this research project is to design and carry out a two week "you make me smile" study/campaign on campus. Our goal is to see if we can help people become more aware/mindful of opportunities to smile and make others smile. If it works, we will all be bathed in a sea of endorphins! Attendees at the session will hear about the results of a trial with students participating in three class in the Fall term and will be encouraged to participate in a faculty/staff trial of the of the concept. Oh, everyone gets a free smile just for attending!

Mindfulness, Human Development, Gratefulness, Smile



Finally! The SE US Collections at NKU's John W. Thieret Herbarium Go Virtual

For many botanists, access to reference collections of plants is as important as access to scientific literature. A herbarium is a collection of preserved plant specimens, used for research and study. NKU's John W. Thieret Herbarium (KNK) consists of about 30,000 pressed, dried plant specimens. Each specimen is mounted on stiff paper to allow safe handling, and includes a label that says what it is, what it looked like, where and when it was collected, and who collected it. These can be used as a reference for plant ID, or as a data source to answer questions like: When does Plant A bloom? Where is Plant B found? Is Plant C getting rarer? How fast are invasive species moving in?

In the past, most schools had herbaria, but they are becoming less and less common, particularly at undergraduate institutions. NKU's herbarium is a unique treasure-trove of botanical information about the SE US, but has been under-used by both scientists and students because 1) there was no catalogue to help potential users locate the specimens they needed, and 2) using specimens required either a visit to NKU or a loan request (to have specimens mailed to the borrowing institution). Herbaria and museums around the world face the same problem: how to maximize use of fragile, irreplaceable physical collections? Increasingly, the answer is to create virtual collections that offsite users can search and sort without having to handle actual specimens.

In 2007, KNK received KY EPSCoR funding for barcode labels, barcoding equipment, and student workers. This allowed us to begin generating a catalogue of the collections and to assign each specimen a unique reference number. Using the program Specify, databasing of collection labels also began, so that each barcode was not only attached to a physical specimen, but also linked to a digital record of information about the specimen.

In 2014, as part of a collaborative effort headed by Appalachian State University, KNK was one of over 100 herbaria that got NSF funding to create a massive, online, virtual herbarium for the southeastern United States. At KNK, this funded student workers and the purchase of digital imaging equipment so that high-resolution images of specimens could be linked to databased label information.

In 2017, the last of KNK's SE US specimens were barcoded and imaged (over 3/4 of our total collections). We now have a virtual herbarium with images of every specimen collected in Kentucky. For the first time, we know exactly what we have from the Southeast, and can sort and search that information in ways not possible with physical specimens. Data on over 26,000 KNK specimens is freely available to all users via the web portal at: <http://sernecportal.org/portal/collections/misc/collprofiles.php?collid=261>

Virtual collections can be artistic and historical, are useful for plant ID, and provide raw data for statistics and study. This opens new opportunities for use of collections information in the classroom or for research. Take advantage!

Virtual Herbarium, Digitization, Museum Collections, Botany, Kentucky Flora

Contribution of the NMDA NR2B Subunit to Methamphetamine Conditioned Place Preference

Psychostimulant abuse has become a major issue in the United States. Methamphetamine, which has high abuse potential, has become especially problematic. With no current FDA-approved pharmacotherapies for psychostimulant drugs, it is difficult for individuals to decrease their methamphetamine use.

The goal of the current experiments was to determine if Ro 63-1908, a highly selective N-methyl-D-aspartate (NMDA) NR2B subunit antagonist (i.e., blocks the receptor and prevents it from functioning normally), is capable of decreasing the conditioned rewarding effects of methamphetamine. The NMDA receptor is part of the glutamatergic system and is composed of four subunits: NR1 and NR2. The NR2 subunit can be further subdivided into NR2A, NR2B, NR2C, and NR2D. Glutamate is the major excitatory neurotransmitter in the mammalian brain (think of glutamate as the gas pedal of the central nervous system). Glutamate is heavily involved in learning and memory, and the NR2B subunit has recently been identified as an important target for substance use disorders. Male Sprague-Dawley rats (N = 36) were tested in two conditioned place preference (CPP) procedures. In CPP, animals learn to associate a drug with one environmental context and vehicle (e.g., saline) in another environmental context. Animals are then tested in a drug-free state to see which environmental context they prefer. If a drug has abuse potential, animals will spend more time in the context previously paired with that drug. The effects of Ro 63-1908 (0, 1.0, 3.0 mg/kg; s.c.) were tested on the acquisition (Experiment 1) or the expression (Experiment 2) of methamphetamine CPP.

Acquisition is analogous to the early stages of substance abuse; this is when an individual learns to use a drug. Expression models drug use that has occurred over a period of time (i.e., drug-taking behavior is well established). All rats received a 15-min pretest, in which they were allowed to explore both chambers in a drug-free state. During the next 8 days, rats received alternating injections of methamphetamine or saline (a total of four methamphetamine injections and four saline injections).

During the acquisition experiment, rats received Ro 63-1908 (0, 1.0, 3.0 mg/kg; note, each group of rats received just one dose of Ro 63-1908) 30 min before receiving each injection of methamphetamine. All rats received a posttest, which was identical to the pretest.

During the expression experiment, rats received an injection of Ro 63-1908 30 min before the posttest. Ro 63-1908 (3.0 mg/kg) blocked the acquisition of methamphetamine CPP, as evidenced by a decrease in preference ratios (note: preference ratios are calculated as the time spent in the chamber paired with methamphetamine/the time spent in both methamphetamine and saline chambers).

Although rats treated with Ro 63-1908 (3.0 mg/kg) did not show expression of methamphetamine CPP, preference ratios did not significantly differ from rats treated with vehicle; therefore, caution is needed when interpreting the effects of Ro 63-1908 on the expression of methamphetamine reward. Together, these findings suggest that the NR2B subunit is an important mediator of the acquisition, but not necessarily the expression, of the conditioned rewarding effects of methamphetamine.

Methamphetamine, NMDA Receptor, NR2B Subunit, Conditioned Place Preference, Acquisition, Expression



Dressing in the Mother: John Webster's Revenge Tragedy *The Duchess of Malfi* and the Voices of "Me Too"

Let all sweet ladies break their flatt'ring glasses / And dress themselves in her. - Antonio 1.1.199-200

Her eye opes, / And heaven in it seems to ope, that late was shut, / To take me up to mercy. — Bosola 4.2.337-339

These idealizing remarks - that "sweet ladies" might "dress" in the Duchess and that the sinner might be saved through the "heaven" in "her eye" - expose the dramatic crux of the Duchess's body as depicted throughout John Webster's revenge tragedy. Her husband Antonio's line, for example, deploys an imaginary that destroys the image reflected in the mirror in favor of the Duchess's body fleshing out his male phantasy. The Duchess's servant Bosola, hired by her two brothers to ensure she remains chaste and unmarried, comes to regret his part in her undoing and finds merciful redemption in her last look.

As her husband Antonio, her servant Bosola, and even her twin brother Ferdinand take turns idealizing and demonizing the Duchess's character, her body destabilizes into a pattern of experience both redemptive and damning. That experience is predominantly a male experience. The Duchess's struggle is a struggle against coercion, not to embody male phantasy, not to enact male desire, and not to be cloaked by their shame. She must work constantly to differentiate herself from the patriarchal energies that relegate her to the role of primary love object without concern for her person as an autonomous subject.

I perceive in the tragedy's male protagonists the regulatory production that results in the Duchess's corpse. I also recognize their need for the Duchess to contain anxieties over their own flesh and maternity, as supported by the medical treatises of the time. This interdisciplinary essay examines the patriarchal tensions surrounding the Duchess's body by integrating material from the following disciplinary intersections: John Webster's medical rhetoric and use of humoral theory alongside psychiatrist Thomas Ogden's concept of the paranoid-schizoid mode of experience. In the end, this essay uses a 17th century Jacobean revenge tragedy to highlight the ways in which relational structures, whether personal or professional, require a scale of emotional work from women that is simply not required or expected of men, to this point.

I share this essay in solidarity with the Me Too movement. The voicing of stories, despite personal and professional risk, changes the environment from one of shame and potential endangerment to recognition and potential change. The cultural shift thus far has a good deal to do with the lifting of shame from victims and placing it squarely on the shoulders of perpetrators. But especially for those who continue to ignore the systemic nature of sexual harassment and assault, this essay serves as a reminder that such power structures must be dismantled for any substantial change to be made to the environment women daily navigate, including on a college campus. By integrating the work of multiple disciplines, I aim to reach a more diverse academic audience, to encourage mutual investment in an issue shared across discipline and campus.

The "Me Too" Movement, Sexual Assault, Sexual Harassment, Shame, Relational Theories, John Webster, *The Duchess of Malfi*, Revenge Tragedy



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