

The Office of the Provost and Vice President &
the Honors College present

UNIVERSITY SCHOLARS DAY

Featuring
Undergraduate
Research

APRIL 20, 2016

 HONORS
COLLEGE

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**The Office of the Provost and
Vice President for Academic Affairs
&**

**The Honors College
Welcome You
to**

UNIVERSITY SCHOLARS DAY

University Union, Third Floor
April 20, 2016

9:00 a.m. – 4:30 p.m. Check-In
University Union Ballroom 315, Lobby
University Union Small Ballroom, 333, Lobby

9:30 a.m. – 3:15 p.m. PANELS
9:30 – 10:45 a.m. Panels 1 – 3
11:00 – 12:15 p.m. Panels 4 – 8
12:30 – 1:45 p.m. Panels 9 – 13
2:00 – 3:15 p.m. Panels 14 – 18

1:00 – 3:30 p.m. Posters on Display
University Union, Ballroom

3:30 – 4:30 p.m. Awards Presentation and Keynote Address
University Union, Ballroom

Welcome: Dr. Glênisson de Oliveira, Dean, TAMS and the Honors
College

Keynote Address: *My Path to Becoming a Research Veterinarian*
Sol Hauge Svensson, Department of Biology, Honors College,
University of North Texas

Special Awards: Dr. Rafael Major, Honors College

UNIVERSITY SCHOLARS DAY PLANNING COMMITTEE

Dr. Glênisson de Oliveira, Dean, Honors College; Dean, Texas Academy of Math and Science
Dr. Waquar Ahmed, Department of Geography
Mr. Thorne Anderson, Mayborn School of Journalism
Dr. Aryn Amlani, Department of Audiology and Speech-Language Pathology
Dr. Heidemarie Blumenthal, Department of Psychology
Dr. Sarah Crowder, Department of Linguistics
Dr. Narendra Dahotre, Department of Materials Science and Engineering
Dr. Beverly Davenport, Department of Anthropology
Dr. Rebecca Dickstein, Department of Biological Sciences
Dr. Kelly Donahue-Wallace, Department of Art Education and Art History
Dr. Jim Duban, Honors College
Dr. Nandika D'Souza, Department of Mechanical and Energy Engineering
Dr. Koji Fuse, Mayborn School of Journalism
Dr. Eric Gruver, Honors College
Dr. Lee Hughes, Department of Biological Sciences
Dr. Dina Kapetangianni, Department of Linguistics
Dr. James Kennedy, Department of Biological Sciences
Dr. Amanda Labue, Department of Audiology and Speech-Language
Dr. Yuankun Lin, Department of Physics
Dr. Rafe Major, Scholars Day Director, Honors College
Mr. Eugene Martin, Department of Media Arts
Dr. Jim Meernik, Department of Political Science
Dr. Thomas Miles, Honors College
Dr. Lindsey Moore, Department of Technical Communication
Dr. Lisa Nagaoka, Department of Geography
Dr. Arup Neogi, Department of Physics
Dr. Craig Neumann, Department of Psychology
Mr. Zachary Powell, Department of Criminal Justice
Dr. Douglas Root, Department of Biological Sciences
Dr. Jesús Rosales-Ruiz, Department of Applied Behavior Analysis
Dr. Michael Thompson, Department of Sociology
Dr. Karen Toussaint, Department of Behavior Analysis
Dr. Mark Vosvick, Department of Psychology
Dr. Chiachih DC Wang, Department of Psychology

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Announcement of the Scholars Day Research Travel Awards for Best Papers and Posters

Dr. Glênisson de Oliveira, Dean of TAMS and the Honors College, and Dr. Tom McCoy, Vice President for the Office of Research and Economic Development (ORED), are pleased to announce that the Office of Research and Economic Development is funding awards for undergraduates presenting the best papers and posters at University Scholars Day.

Awards will be made within the categories of (1) Natural Sciences, Mathematics, and Engineering; (2) the Social and Behavioral Sciences, Business, Merchandising, Hospitality and Tourism; (3) the Arts and Humanities and (4) Fine Arts and Performance. For papers, the student authors of the first-, second-, and third-place papers will receive prizes of \$450, \$350, and \$250, respectively. For posters and Fine Arts/Performances, the first-, second- and third-place winners will receive \$300, \$200, and \$100, respectively. If a winning paper has multiple authors, the students will split the prize.

Award winners will be eligible to compete for an additional \$500 award for travel to a regional, national, or international professional conference to present their research paper or poster within the year following University Scholars Day. As only ten travel awards are available, students should apply for the travel award as soon as their papers are accepted for presentation. Students must thereafter provide a brief summary (250 words or less) stating the title of the work; the authors and the faculty mentors; the name, place, and date of the meeting; and a brief abstract.

SOL HAUGE-SVENSSON, B.S. BIOLOGY, 2016

KEYNOTE SPEAKER

My Path to Becoming a Research Veterinarian

We are delighted to have as our keynote speaker Ms. Sol Hauge-Svensson, a UNT student from Norway. She arrived here in 2013 to pursue a degree in Biology and has recently gained admission to the prestigious Royal Veterinary School of Medicine, in London. Closer to home, the UNT Department of Biological Sciences awarded Sol the David R. Redden Scholarship for excellence, effort, and academic achievement. She also serves as Treasurer of the UNT Pre-Veterinary Society and is a member of both the National Society of Collegiate Scholars and the Honor Society of Phi Kappa Phi. Sol's Honors College thesis explores ways of adapting a long-wave instrument invented for human therapy to treat common leg injuries in horses. We are pleased to welcome this soon-to-be UNT alumna, who will offer reflections on her as-yet-young, but still highly impressive, journey toward success.

UNIVERSITY SCHOLARS DAY 2016
APRIL 20, 2016

PANEL PRESENTATION SCHEDULE

SESSION 1: Images of the Mexican-American Conflict

9:30-10:45 Union 333A

Chair: Dr. Kelly Donahue-Wallace, Department of Teacher Education and Administration

Rebecca Brand, Department of Art Education and Art History

Faculty Mentor: Dr. Kelly Donahue-Wallace, Department of Art Education and Art History

Title: The Other Side: Fifteen Mexicans and an American

Melissa Brito-Alvarez, Department of Art Education and Art History

Faculty Mentor: Dr. Kelly Donahue-Wallace, Department of Art Education and Art History

Title: The Misidentified: Exploration of Fredrick Catherwood's Representation of Indigenous Mexicans

Tiffany Grassmuck, Department of Art Education and Art History

Faculty Mentor: Dr. Kelly Donahue-Wallace, Department of Art Education and Art History

Title: Illustrating American Power and Privilege: Images of Mexico as the Other in Albert S. Evans's *Our Sister Republic: A Gala Trip through Tropical Mexico*

Matthew Rudy, Department of Art Education and Art History

Faculty Mentor: Dr. Kelly Donahue-Wallace, Department of Art Education and Art History

Title: Analysis of Images in Mexican-American War Literature

Hannah Wilson, Department of Art Education and Art History; Honors College

Faculty Mentor: Dr. Kelly Donahue-Wallace, Department of Art Education and Art History

Title: Hubert Howe Bancroft: Behind the Façade of a Professional Historian

SESSION 2: Social Sciences

9:30-10:45 Union 333B

Chair: Dr. Tom Miles, Honors College

Samantha Belson, Department of Sociology

Faculty Mentor: Dr. Michael Thompson, Department of Sociology

Title: Missionary Work: Why Do Christians Participate?

Joshua Bova, Department of Geography; Honors College

Faculty Mentor: Dr. Lisa Nagaoka, Department of Geography

Title: Keeping Denton Beautiful: Evaluating the Effectiveness of an Urban Community Tree Giveaway Program in Denton, Texas

Will Primrose, Department of Geography
Faculty Mentor: Dr. Waquar Ahmed, Department of Geography
Title: Rock Climbing and Its Intersections with Race and Class

Laura Sanders, Department of Political Science; Honors College
Faculty Mentor: Dr. Tom Miles Honors College
Title: Forsaken Children: Medicaid Budget Cuts and Children with Disabilities

SESSION 3: Issues in Education

11:00-12:15 Union 333A

Chair: TBD

Sanober Ali, Department of Sociology
Faculty Mentor: Dr. Michael Thompson, Department of Sociology
Title: Learning How to Learn

Jennifer Frederick, Department of Audiology and Speech-Language Pathology; Honors College
Faculty Mentor: Dr. Amana Labue, Department of Audiology and Speech-Language Pathology
Title: Effects of Hearing Impairment in School-Age Children

Ernest Sanchez, Department of Linguistics; Honors College
Faculty Mentor: Dr. Konstantia Kapetangianni, Department of Linguistics
Title: Teaching Grammatical Gender in German through Mnemonics

SESSION 4: Contextual Studies of Richard Wright's *Native Son*

11:00-12:15 Union 333B

Chair: Dr. James Duban, Honors College

Stormie Garza, Department of Biomedical Engineering; Honors College
Faculty Mentor: Dr. James Duban, Honors College
Title: Perceptual Misadventure: Becoming Rather than Enacting the Stereotype in Wright's *Native Son* and Melville's "Benito Cereno"

Rachel Martinez, Department of Psychology; Honors College
Faculty Mentor: Dr. James Duban, Honors College
Title: The Cognitive Dissonance of Bigger Thomas

Molly Riddell, Department of English; Honors College
Faculty Mentor: Dr. James Duban, Honors College
Title: The Equal of Them: Violence and Equality in *Native Son* and "The Man Who Was Almost a Man"

Yacine Ndiaye, Department of Biology

Faculty Mentor: Dr. James Duban

Title: Psychologically Rather than Physically Dismembered: Reconsideration of Self-conception in *Native Son* and *Moby Dick*

SESSION 5: Sociology

11:00-12:15 Union 333C

Chair: Dr. Michael Thompson

Ke'Yonna Hall, Department of Sociology

Faculty Mentor: Dr. Michael Thompson, Department of Sociology

Title: A Different World: Understanding Higher Education Barriers of First Generation African American Girls

Jazmine McGill, Department of Sociology; Honors College

Faculty Mentor: Dr. Michael Thompson, Department of Sociology

Title: Acculturation Strategies and Their Effects on Educational Attainment for African Americans

Jennifer Miller, Department of Sociology

Faculty Mentor: Dr. Michael Thompson, Department of Sociology

Title: The Macho Man Paradigm: Investigating Hypermasculinity and Class

SESSION 6: Addressing Current Problems

11:00-12:15 Union 382A

Chair: Dr. Tom Miles, Honors College

Lauren Wieland, Department of Biological Sciences Honors College

Faculty Mentor: Dr. Tom Miles, Honors College

Title: Spread of Canine Distemper Virus in Large Felines

Angela Yin, Department of Psychology; Honors College

Faculty Mentor: Dr. Chiachih DC Wang, Department of Psychology

Title: Moderation Effects of Cultural Self-Construal on Attachment and Romantic Relationship Quality

SESSION 7: Documentary Film Presentations

11:00-12:15 Union 382B

Chelsea Beeson, Department of Media Arts; Honors College; McNair Scholars Program

Faculty Mentor: Mr. Eugene Martin, Department of Media Arts

Title: Keep Denton Queer

Tyler Cleveland, Mayborn School of Journalism
Faculty Mentor: Mr. Thorne Anderson, Mayborn School of Journalism
Title: Heart of Mexico: Migrant Dreams

SESSION 8: Physical Sciences

12:30-1:45 Union 333A

Chair: TBD

Anagha Krishnan, Texas Academy of Mathematics and Science
Faculty Mentor: Dr. Arup Neogi, Department of Physics
Title: An Air-Doped Polylactide Plastic Crystal for Enhanced Ultrasound Imaging and Submarine Cloaking

Aaron Raper, Department of Biological Sciences
Faculty Mentor: Dr. Waquar Ahmed, Department of Geography
Title: The Trinity River Corridor Project: Genuine Intentions, or a "Green" Trojan Horse

David Yuan, Texas Academy of Mathematics and Science
Faculty Mentor: Lei Chen, Georgia Southern Information Technology
Title: A Routing Algorithm with Path Randomization for Enhanced Security and Balanced Energy Consumption

SESSION 9: U.S. Foreign Policy and Global Governance

12:30-1:45 Union 333B

Chair: Mr. Nam Nguyen

Kyle Allen, Department of Political Science; Honors College
Faculty Mentor: Dr. Jim Meernik, Department of Political Science
Title: Characterizing U.S. Foreign Policy Response in the Russo-Ukrainian Crisis

Christopher Otis, Department of Geography
Faculty Mentor: Dr. Waquar Ahmed, Department of Geography
Title: Investigating the Relationship between the Political-Economy of Coltan and Social Unrest/Violence in the DRC

Jacqueline Sears and Keyona Butler, Mayborn School of Journalism
Faculty Mentor: Koji Fuse, Mayborn School of Journalism
Title: Toshiba vs. Corporate Governance

SESSION 10: Art History

12:30-1:45 Union 333C

Chair: TBD

Ethan Cramer, Department of Art Education and Art History
Faculty Mentor: Dr. Kelly Donahue-Wallace, Department of Art Education and Art History
Title: Questions of Orientalism in America's Cartographic Visions of Mexico

Jungwan Kim, Department of Art Education and Art History
Faculty Mentor: Dr. Kelly Donahue-Wallace, Department of Art Education and Art History
Title: The Image of Mexico in Letters from Mexico: Hegemonic Relations between the U.S. and Mexico in the Late Nineteenth Century

Christianna Reyes, Department of Art Education and Art History; Honors College
Faculty Mentor: Dr. Kelly Donahue-Wallace, Department of Art Education and Art History
Title: Erasing Mexico. Notes on the Upper Rio Grande: Documentation for the Sake of Future Exploitation

SESSION 11: Anthropology and Human Behavior

2:00-3:15 Union 333A

Chair: Dr. Konstantia Kapetangianni

Christine Carr, Department of Linguistics
Faculty Mentor: Dr. Dina Kapetangianni, Department of Linguistics
Title: The Broeation of the Brologism: A Study on the Formation of Internet Blends

Anna Frosch, Department of Anthropology; Honors College
Faculty Mentor: Dr. Beverly Davenport, Department of Anthropology
Title: Ethics of Social Marketing: How Do We Measure Social Good and What Impact Does this Have on Society?

Trenton Rich, Integrative Studies
Faculty Mentor: Dr. Jesús Rosales-Ruiz, Department of Applied Behavior Analysis
Title: Enabling Potential in Education

Patrick Schaab, Department of English; Honors College
Faculty Mentor: Dr. Tom Miles, Honors College
Title: Teaching New Dogs Old Tricks: The Use of Millennia-Old Teaching Techniques in a Modern Globalized World

SESSION 12: Literature Old and New

2:00-3:15 Union 333B

Chair: Dr. Tom Miles, Honors College

Leta Cunningham, Department of English; Honors College
Faculty Mentor: Shannon Abbott, Department of English
Title: Unwell

Rachel Torres, Department of Political Science; Honors College

Faculty Mentor: Dr. James Duban, Honors College

Title: Through His Eyes: Critical Analysis of Wright's *Native Son* and Dostoyevsky's *Crime and Punishment*

SESSION 13: Science, Health and Environment

2:00-3:15 Union 333C

Chair: TBD

Elizabeth Fetherman, Department of Audiology and Speech-Language Pathology; Honors College

Faculty Mentor: Dr. Aryn Amlani, Department of Audiology and Speech-Language Pathology

Title: Quantifying Mild Blast-induced Traumatic Brain Injury (mTBI) through Acoustic Analysis

Melanie Gonzalez, Department of Geography

Faculty Mentor: Dr. Waqar Ahmed, Department of Geography

Title: An Investigation of Native Plants for Maintenance Cost Reduction in the North Central Texas Region

Ashley Huang, Texas Academy of Mathematics and Science

Faculty Mentor: Dr. Douglas Root, Department of Biological Sciences

Title: Effect of Modified Poly-D and Poly-L Lysines on Wildtype and Mutant β -Myosin Coiled-Coils

Jessica Lanza, Department of Biological Sciences; Honors College

Faculty Mentor: Dr. Tom Miles, Honors College

Title: Hidden Dangers of Hydraulic Fracture Drilling: Increased Leukemia Rates in North Texas

ABSTRACTS FOR VIDEO PRESENTATIONS

Chelsea Beeson, Department of Media Arts; Honors College; McNair Scholars Program

Faculty Mentor: Mr. Eugene Martin, Department of Media Arts

Title: Keep Denton Queer

Keep Denton Queer is an investigative documentary detailing the frustrations of Myl and Ali, two former Denton residents and members of the queer community. The video explores how Myl, a person of color, feels isolated from the community, while Ali outlines their life and how Denton was once a window of opportunity in comparison to their hometown, Belton, Texas. Both Myl and Ali, because of their skin color, now feel shut out of the queer community and the punk scene. Ali details how their blackness was fetishized in the punk community, and that they now struggle with body image and self-acceptance. Ultimately, both decide to leave Denton to explore more inclusive queer communities.

Tyler Cleveland, Mayborn School of Journalism

Faculty Mentor: Mr. Thorne Anderson, Mayborn School of Journalism

Title: Heart of Mexico: Migrant Dreams

Raymundo Leal has seen families torn apart by migration. He wants his son to grow up without the struggle that so many face in Tunkas, Mexico, where 75 percent of the town migrates for work. When Leal was two years old, his father left for the U.S. to find work. His mother followed and had two more children there while Leal, a young teen, was left behind to care for the family inheritance. Leal embraced Tunkas and began building a strong life for himself on his father's ranch. An active member of the community, he coaches kids in soccer and mentors adults in professional beekeeping. Leal is now a public servant in the municipal government, a position he uses to encourage and build up his community, motivating others to do their part. The ancient practice of bee-keeping serves as a bulwark against the destructive forces of migration.

ABSTRACTS FOR PANEL SESSIONS

Sanober Ali, Department of Sociology

Faculty Mentor: Dr. Michael Thompson, Department of Sociology

Title: Learning How to Learn

Learning styles are preferential techniques that allow individuals to maximize their ability to retain information. According to David Kolb, leaning involves four phases that correlate to a preferential learning style, with a degree of flexibility. Kolb's learning-style inventory identifies 4 distinct learning styles: converger, accommodator, assimilator, and diverger. Individuals can maximize their learning retention by developing their style. Through questionnaires directed toward undergraduates, this paper seeks to understand how learning styles relate to academic success and the desire to pursue higher education. In particular, I will examine how the categories of Kolb's learning styles are matched to the respondent, and how that match relates to and predicts the academic success of the student. This study comprises an important step toward understanding which learning styles promote the most academic success, allowing us to determine if implementation of teaching strategies that focus on learning styles is beneficial.

Kyle Allen, Department of Political Science; Honors College

Faculty Mentor: Dr. Jim Meernik, Department of Political Science

Title: Characterizing U.S. Foreign Policy Response in the Russo-Ukrainian Crisis

Russia's 2014 invasion of Ukraine and annexation of Crimea characterized a new, more aggressive foreign policy for Vladimir Putin. This study attempts to explain recent U.S. foreign-policy responses to re-emerging Cold-War-era-style proxy conflicts. I use perspective-differential-analysis models to analyze foreign policy decision-making bodies in the United States to determine how policy in response to the Russo-Ukrainian Crisis is being formulated. The models for analysis, derived from the works of Graham Allison and David Houghton, entail the following considerations: (1) perceiving the U.S. response as the result of acting as a single, rational actor; (2) assuming that governmental organizations function in their regular patterns of behavior; (3) positing bureaucratic and political compromises on policy; (4) accounting for social organization within decision-making bodies; and (5) taking account of psychological and behavior-analysis studies of government leaders. Following the results of perspective-differential analysis, this study characterizes U.S. policy and evaluates its effectiveness.

Samantha Belson, Department of Sociology

Faculty Mentor: Dr. Michael Thompson, Department of Sociology

Title: Missionary Work: Why Do Christians Participate?

Historically, Christian missionaries facilitated conversion and colonialism, a union of interests that, even today, perpetuates the impression in American Society that missionaries as aggressive zealots imposing their faith onto others. This paper explores the real reasons Christians undertake mission trips. My project relies on surveys distributed to missionary participants through snowball sampling for a descriptive, multivariate analysis. The levels of piety, happiness, and

self-esteem were measured through Likert-scale coding within the responses. Expected findings will likely reveal a strong correlation between religiosity with happiness and self-esteem, as well as a correlation between these measured levels with Christians' reasons for becoming missionaries. An understanding of why Christians proselytize will put to rest certain negative stereotypes and contributed to an understanding the attitudes of those whom they seek to change.

Joshua Bova, Department of Geography; Honors College

Faculty Mentor: Dr. Lisa Nagaoka, Department of Geography

Title: Keeping Denton Beautiful: Evaluating the Effectiveness of an Urban Community Tree Giveaway Program in Denton, Texas

Urban trees provide a multitude of ecosystem services, such as improving air quality, reducing the urban heat island effect, increasing property values, and reducing storm-water runoff. However, an estimated 600 million trees have been lost to urban development over the last three decades. This trend is likely to continue as more people inhabit urban areas. Therefore, mitigating this loss and increasing urban tree growth has become a priority for many American cities. Programs such as Million Trees New York City and The Tree Bank Foundation, in Oklahoma, have increased urban forest growth and provided tree-planting educational resources, with the overarching goal of improving the quality of life within their communities. To evaluate the impact of tree giveaway programs, we studied tree survivorship and demographic characteristics of participants in a tree-giveaway program in Denton, Texas. Keep Denton Beautiful (KDB), a non-profit organization, annually provides some 800 trees to residents within its city limits. Our study sample consists of 3,100 trees distributed to 2,111 households from 2010 to 2014. Tree survivorship was assessed by conducting an email survey of tree-giveaway participants. The survey response rate was 26%, generating a sample of 543 respondents. Seventy-five percent of the respondents reported that their trees were alive. Of these, 89% described their trees as healthy. Survivorship ranged from 57% to 98% for the 19 native-tree species given away. Across time, survivorship, declined from 87% for trees distributed in 2014 to 75% in 2010. However, 2011 experienced the lowest survival rate at 71%, which is likely due to drought conditions that year. Thus, while survivorship varied across tree species and declined over time, it was still relatively high. To understand better if the tree-giveaway program is being utilized by all the city's constituency, program participation was evaluated using participant addresses and parcel data. Households participating in the program were randomly distributed across the city. However, our using housing appraisal data as an economic indicator of representation, revealed that certain socioeconomic groups were underrepresented. Participants with household incomes below \$100,000 were underrepresented and were also less likely to participate more than one year. Therefore, these communities will need to be targeted for future participation. With high rates of tree survivorship and broad distribution across the city, the Keep Denton Beautiful tree-giveaway program appears to be an effective means for restoring the city's urban forest within residential areas. Still, the program stands to improve were it to increase participation in underrepresented communities. Plans to expand the program have the potential significantly to provide long-lasting positive effects on tree quantities and canopy coverage in Denton's urban landscape.

Rebecca Brand, Department of Art Education and Art History

Faculty Mentor: Dr. Kelly Donahue-Wallace, Department of Art Education and Art History

Title: The Other Side: Fifteen Mexicans and an American

The pursuit of Manifest Destiny during the Mexican-American War featured the rationalization of greed, violence, and manipulation that America used to gain Mexican territory. This paper argues that Albert C. Ramsey's *The Other Side: or Notes for the History of the War Between Mexico*, along with a translation of a Mexican account of the war, *Apuntes para la Historia de la Guerra entre México y los Estados-Unidos* (attributed to Ramón Alcaraz), depicts the Mexican perspective on the war to counter American misrepresentations of Mexico. Using the critical lens of postcolonial theory, my research method facilitates a close reading and comparative analysis of the primary cartographic sources and portraits of historical figures in the English text, comparing those to the equivalent illustrations from the Spanish text. I conclude that Ramsey—utilizing the translation of a historical narrative composed by fifteen contributing Mexican authors, and using the same primary cartographic sources, while excluding American portraits—seems determined to preserve the Mexican perspective.

Melissa Brito-Alvarez, Department of Art Education and Art History

Faculty Mentor: Dr. Kelly Donahue-Wallace, Department of Art Education and Art History

Title: The Misidentified: Exploration of Fredrick Catherwood's Representation of Indigenous Mexicans

In the years before the Mexican-American War, explorer John Lloyd Stephens travelled to the Yucatan to explore uncharted land and record his findings with artist Fredrick Catherwood. The underlying tension caused by the desire of the United States to expand through the theory of Manifest Destiny created conflict and began to divide the United States and Mexico. Stephens and Catherwood's book and illustrations indicates some of the effects of Manifest Destiny. Through postcolonial theory, this paper analyzes 1805-1852 Incidents of Travel in Yucatan, in an attempt to answer questions surrounding American bias and cultural dominance through imagery.

Christine Carr, Department of Linguistics

Faculty Mentor: Dr. Dina Kapetangianni, Department of Linguistics

Title: The Broeation of the Brologism: A Study on the Formation of Internet Blends

This paper discusses and analyzes Internet bro-neologisms, such as “bromance” and “bromandment.” Previous studies ponder whether such phonological factors as stress and length patterns play a heavier role in blend formation than does the retention of the original morphological structure of the word. The current study seeks to contribute to this debate by investigating how bro-neologisms are formed and which constraints are crucial in the creation of these blends. In the current study, data were collected through written and oral tests administered to 20 participants who were asked to create blended words using “bro” along with 10 words that we collected from Tumblr and Twitter. Preliminary results reveal a tendency by speakers to retain stress patterns and length patterns in bro-neologisms, supporting the phonological constraints on blend formation.

Ethan Cramer, Department of Art Education and Art History

Faculty Mentor: Dr. Kelly Donahue-Wallace, Department of Art Education and Art History

Title: Questions of Orientalism in America's Cartographic Visions of Mexico

Cartographic representations of Mexico by American mapmakers were central in defining territorial borders between America and Mexico. After Mexico gained its status as an independent republic in 1824, the United States was still consolidating its borders and establishing itself as a nation. The Monroe Doctrine, Manifest Destiny and concepts of Western exceptionalism provided justification for the United States' attempts to acquire land from, and democratize, Mexico. I am researching cartographic representations of Mexico and how maps provide visual representations of how territorial boundaries are defined by ongoing diplomatic negotiations and conflict. This paper also argues that John Milton Niles' Map of Mexico and the Republic of Texas (1838) was published to encourage interest in American expansionism. By applying post-colonial theory to a close reading of John Milton Niles' *Map of Mexico and the Republic of Texas* and other primary and secondary sources, I am claiming that Niles' map displayed Mexico's land as available for imperialistic opportunities. My paper also claims that Niles' map serves as visual documentation of Mexican and Texan diplomatic tensions.

Leta Cunningham, Department of English; Honors College

Faculty Mentor: Shannon Abbott, Department of English

Title: Unwell

I am currently working on a creative Honors Thesis under the supervision of Shannon Abbott and Dr. Thomas Miles. My project is a non-fiction book constructed of narrative personal essays structured as vignette-like chapters that explore the physical, psychological and emotional relationships people have with food. I thereby seek to build a cohesive exploration of the nature of my own eating disorder and how it relates to the eating habits of my maternal family members and close friends. I aim, as well, to provide a fuller understanding of how mental health and nutrition intersect via engaging narratives. This type of non-fiction seeks to offer a more creative and narrative-based explanation of body-mind relationships than do conventional research-based studies. I also plan to facilitate three group readings for UNT students between now and my graduation in spring 2017. These readings will feature student poetry and prose, likewise examining the themes of food and mental health.

Elizabeth Fetherman, Department of Audiology and Speech-Language Pathology; Honors College

Faculty Mentor: Dr. Aryn Amlani, Department of Audiology and Speech-Language Pathology

Title: Quantifying Mild Blast-induced Traumatic Brain Injury (mTBI) through Acoustic Analysis

Blast-induced mild traumatic brain injury (mTBI), also called blast-induced TBI, results solely from the initial blast wave of an explosive, often with no other injury present. Because of the lack of apparent physical injury, as well as the number of symptoms shared with post-traumatic stress disorder (PTSD), accurately identifying mTBI has evaded the scientific and medical communities. In this study, I hypothesize that results of spectrogram analysis and targeted

cognitive functioning tests will reveal the presence of blast-induced TBI, leading to an increased use of speech and voice analysis as a diagnostic tool in determining mTBI.

Jennifer Frederick, Department of Audiology and Speech-Language Pathology; Honors College

Faculty Mentor: Dr. Amanda Labue, Department of Audiology and Speech-Language Pathology

Title: Effects of Hearing Impairment in School-Age Children

The effects of hearing loss in school-age children can negatively impact an individual's development, and untreated hearing loss often causes career and relationship strain in adulthood. School-age children develop and refine many skills that contribute to their long-term academic and personal success, so ensuring that they have the capability to learn effectively is paramount. Featuring audiological research, this paper will investigate ways in which various types and degrees of hearing loss affect school-age children; my study also assesses what treatments or educational interventions best address these problems. Understanding these issues is important because, when properly diagnosed and treated, many children with hearing impairments can enjoy the same opportunities and developmental advancements as do their non-hearing-impaired peers. To achieve this goal audiologists, speech pathologists, and hearing-impaired persons must speak out and educate the public about the needs of students with hearing loss. Without such interventions, these children will continue to be overlooked in the classroom and will not reach their full academic and social potential.

Anna Frosch, Department of Anthropology; Honors College

Faculty Mentor: Dr. Beverly Davenport, Department of Anthropology

Title: Ethics of Social Marketing: How Do We Measure Social Good and What Impact Does this Have on Society?

How do we measure social good and the effects of marketing campaigns? This paper specifically seeks to examine these questions and explore a sector of advertising and public relations known as Social Marketing or causational-marketing. Social Marketing seeks to use and develop activities aimed at changing or maintaining people's behavior for the benefit of individuals and society as a whole. Contrary to some professional's belief, true social marketing is not for profit. Through library-based research, case-study analysis, and anthropological methods, this project seeks to find patterns of campaign mythology and to evaluate how successful campaigns are established and classified as such. I also explore how these campaigns are received from their target audiences. This study is significant in terms of how socially beneficial campaigns are classified, perceived, and how they—if such is the case—impact their audiences. I will identify the successful methods and provide examples of how they could be implemented on the University of North Texas campus.

Stormie Garza, Department of Biomedical Engineering; Honors College

Faculty Mentor: Dr. Jim Duban, Honors College

Title: Perceptual Misadventure: Becoming Rather than Enacting the Stereotype in Wright's *Native Son* and Melville's *Benito Cereno*

A comparison of Richard Wright's *Native Son* (1940) and Herman Melville's "Benito Cereno" (1856) yields similarities between the two main characters and their interactions. "Playing the stereotype" leads to the corruption of both Bigger and Babo. Still, a significant difference resides in narrative artistry: while *Native Son* depicts events through eyes of a black man, "Benito Cereno" dramatizes racial categorization as promulgated by the white, and otherwise liberally disposed, captain, Amaso Delano. The stereotypes impressions experienced by all characters prove to be lessons in perspective that lead to the downfall, alike, of Bigger and Babo.

Melanie Gonzalez, Department of Geography

Faculty Mentor: Dr. Waquar Ahmed, Department of Geography

Title: An Investigation of Native Plants for Maintenance Cost Reduction in the North Central Texas Region

North Central Texas, an area known for severe drought, unstable precipitation patterns, and a quickly growing population rate, will soon require efficient planning to sustain precious resources. The use of vegetation coverage for beautification methods in North Central Texas is necessary, but it often features non-native plants that call for higher amounts of water and other plant-related maintenance requirements than do native plants. The Water Resources Planning and Management department states that "managing water resources is critical to the long-term viability and growth of the region and quality of life for residents" (NCTCOG, 2016). If this vastly growing region overcompensates with beautification methods that ultimately lead to excessive water use, a critical problem will develop amongst the residents. This proposal is intended to transform North Central Texas back to its original state of vegetation rather than to be sucked dry of its already-stressed sources of water and other nutrients. Through a charted comparison of native and non-native plant maintenance requirements, this study will suggest how plant-related maintenance can be reduced through the use of native plants.

Tiffany Grassmuck, Department of Art Education and Art History

Faculty Mentor: Dr. Kelly Donahue-Wallace, Department of Art Education and Art History

Title: Illustrating American Power and Privilege: Images of Mexico as the Other in Albert S. Evans's *Our Sister Republic: A Gala Trip through Tropical Mexico in 1869-70*

After the U.S.-Mexican War, internal power struggles weakened the Mexican nation, and France forcefully established a government there in 1862. In 1867, the United States (U.S.) invoked the Monroe Doctrine and placed military and political support behind exiled Mexican president Benito Juárez. This political action pressured France to withdraw from Mexico and demonstrated how the U.S. exercised on-going hegemony over Mexico. This paper argues that the images and text in Albert S. Evans's *Our Sister Republic: A Gala Trip through Tropical Mexico in 1869-70* misrepresented Mexico to justify American imperialism. Through the lens of postcolonial theory, the images are closely examined and analyzed for what they reveal about U.S. relations with Mexico.

Ke'Yonna Hall, Department of Sociology

Faculty Mentor: Dr. Michael Thompson, Department of Sociology

Title: A Different World: Understanding Higher Education Barriers of First-Generation African American Girls

Over 15 million students are enrolled in postsecondary institutions; of that number, nearly 4.5 million are low-income, first-generation students, according to the National Postsecondary Student Aid Study. First-generation students often have fears and misconceptions about going to college and its costs. Through a mixed-methods study including semi-structured, face-to-face interviews, survey analysis, and secondary data analysis, this paper seeks to understand the challenges, sources of motivation, and other contributing factors to FGC students' success in college. Potential findings may indicate that a student's internal drive affects resilience and resistance in the pursuit of higher education. This study would be an important first step in helping educators and families develop motivational strategies and tools to inspire more students of low SES students to pursue higher education. My research stands, as well, to advance existing models by expanding the range of factors to include parental support and school influences.

Ashley Huang, Texas Academy of Mathematics and Science

Faculty Mentor: Dr. Douglas Root, Department of Biological Sciences

Title: Effect of Modified Poly-D and Poly-L Lysines on Wildtype and Mutant β -Myosin Coiled-Coils

Familial hypertrophic cardiomyopathy, a heart disease marked by thickened ventricles due to various mutations, leads to arrhythmia, chest pains, and heart failure. Approximately 40% of these mutations affect the MYH7 gene, including the E924K mutation, which destabilizes the β -myosin coiled-coil. My project analyzes how synthetic peptides affect wildtype and mutant coiled-coils. I hypothesized that, of the tested peptides, modified poly-D-lysine with phenylalanine at position nine (phe-9) and alanine at position eleven (ala-11) will best stabilize the mutant myosin. In computer simulations that unbind the coiled-coils, unmodified poly-D-lysine and poly-D-lysine-phe-9-ala-11 increased unbinding force the most, suggesting increased stability. The presence of all tested poly-D-lysines increased contact points between residues, also suggesting greater stability. Poly-D-lysine-phe-9-ala-11 increased the rupture force of the structure; poly-L-lysine allowed the mutant myosin to stretch the furthest before breaking. My results show that modified poly-D- and L-lysines are promising peptides for counteracting the effects of the E924K mutation.

Jungwan Kim, Department of Art Education and Art History

Faculty Mentor: Dr. Kelly Donahue-Wallace, Department of Art Education and Art History

Title: The Image of Mexico in Letters from Mexico: Hegemonic Relations between the U.S. and Mexico in the Late Nineteenth Century

Positioning itself as a "guardian" of the Western Hemisphere from European powers, the United States recognized and claimed its power and superiority over newly independent Latin American nations. This political agenda was based on perceived U.S. superiority and was justification for declaring war on Mexico in 1846. With the development of railroads, telegraph, and print during the mid-nineteenth century, the common misperceptions about Mexico disseminated nationwide.

Griffin's *Mexico of To-day* (1886) helped create this discriminatory position. Using postcolonial theory, this research analyzes texts and images in Mexico of To-day, reviewing the comparative contemporary literature and images to argue how the cultural and political hegemony of the United States over Mexico during the late nineteenth century was represented in texts like Griffin's.

Anagha Krishnan, Texas Academy of Mathematics and Science

Faculty Mentor: Dr. Arup Neogi, Department of Physics

Title: An Air-Doped Polylactide Plastic Crystal for Enhanced Ultrasound Imaging and Submarine Cloaking

I have engineered a phononic crystal (PhC) from polylactide plastic for sound-wave manipulation similar to the control of electrical currents through semiconductors, or to the projection of light through photonic crystals. I developed the protocol for designing and testing this crystal under the broader research endeavor of creating ultrasonic lenses and filters to control the propagation of electromagnetic waves at ultrasonic frequencies. My project uses that work as a point of departure to create a PhC that can collimate and absorb sound waves for high-resolution, deep-tissue sonograms and submarine cloaking devices. I predicted that air would be a better phononic material than steel because the density of air is vastly different from its sound velocity. I computationally determined my crystal's transmission features by using the COMSOL platform; I then confirmed these features experimentally via ultrasonic spectroscopy. COMSOL simulations showed that the plastic crystal I engineered has a band gap at 550 kHz and significant distal collimation at 475 kHz. I then confirmed these results experimentally by testing acoustic transmission in both water and gelatinous mediums. These results make my newly designed crystal an excellent candidate for naval applications, including submarine cloaking, as well as for such medical applications as enhanced high-resolution, deep-tissue ultrasound imaging.

Anagha Krishnan, Texas Academy of Mathematics and Science

Faculty Mentor: Dr. Lloyd Lumata, UT-D Department of Physics

Title: Novel Earth's Field Magnetic Resonance Imaging of Copper-Chloride for Inexpensive Disease Detection

The Terranova Earth's Field Nuclear Magnetic Resonance (NMR) device, an alternative to standard NMR devices, relies on the earth's homogeneous magnetic field for imaging but has an inherently low sensitivity due to its weak magnetic field. I investigated whether the Earth's Field NMR provided sufficient resolution to distinguish among varied concentrations of copper-chloride that are used in magnetic resonance imaging (MRI) to visualize cancer and tissue damage. I first determined the temperature dependence of the spin-lattice relaxation time for five concentrations (0, 0.5, 1, 1.5, and 2 mM) of copper-chloride over temperatures between 0 and 100°C. I used FreeCAD and SketchUp software to design containers that I created with a 3D printer. A concentric-circle container represented bone tissue, while a scattered container represented tumor metastasis. I filled these containers with the five concentrations of copper-chloride water and imaged them by using gradient echo and filtered-back-projection imaging techniques. Both the spin-lattice relaxation times and the MRI images showed that the Terranova Earth's Field MRI was able to differentiate between the varied concentrations of copper-chloride

water and thus measure irregularities in copper-chloride absorption. This suggests that Earth's Field MRI technology could be an inexpensive, easily-transportable alternative to conventional MRI machines for basic medical applications in point-of-care locations.

Jessica Lanza, Department of Biological Sciences; Honors College

Faculty Mentor: Dr. Tom Miles, Honors College

Title: Hidden Dangers of Hydraulic Fracture Drilling: Increased Leukemia Rates in North Texas

Is there a relationship between leukemia clusters in North Texas and fracture drilling? Fracture drilling injects millions of gallons of water, sand, and chemicals underground. Only 15-60% of this fluid is actually recovered and then stored in open ponds or injection wells. This toxic fluid is often leaked due to worker negligence, faulty equipment, blowouts, cracks in well casings and intentional disposal of wastewater in water wells and creeks. Many of the drilling sites are located within neighborhoods, which have shown increases in leukemia and lymphoma cases since widespread fracture drilling began, possibly due to benzene contamination. Benzene has been identified as a leading chemical cause of leukemia. This study will compare leukemia and lymphoma cases and proximity of drilling pads. Water samples from households in close proximity to pad sites are currently being tested for benzene, arsenic, and other heavy-metal contamination.

Rachel Martinez, Department of Psychology; Honors College

Faculty Mentor: Dr. Jim Duban, Honors College

Title: The Cognitive Dissonance of Bigger Thomas

What pertinence might the concept of dissonance have for the psychology and sociology of Bigger Thomas in Richard Wright's *Native Son* (1940)? The current study argues that exploring the novel from perspectives informed by this field of cognitive psychology accounts for the perceptual disconnect that results in Bigger's shame, violence, and emerging self-awareness as those pertain to social circumstance and familial interaction. Such are the factors that lead to the murder of Mary Dalton and to Wright's exploration of the psychological foundations of social and emotional turmoil.

Jazmine McGill, Department of Sociology; Honors College

Faculty Mentor: Dr. Michael Thompson, Department of Sociology

Title: Acculturation Strategies and Their Effects on Educational Attainment for African Americans

Although college graduation rates of African Americans have improved, the gap in Bachelor's degree achievement between Blacks and Whites has increased by 5 percentage points since 1990 (ECES, 2014). The objective of this research is to determine if there is a relationship between the educational attainment of African Americans and the acculturation strategy they have chosen. Acculturation is the degree to which a minority has adopted the traditions, beliefs, and values of the dominant group in society (Landrine & Klonoff, 1996). There are four acculturation strategies: assimilation, integration, traditionalist, and marginalization (Obasi, 2010). I intend to distribute a survey that combines the MASPAD, a bi-dimensional instrument that determines which acculturation strategy the participant adheres to, in combination with questions that will

help determine educational achievement. I will examine whether those who adopt the assimilationist strategy are higher achieving. This research could be an important step in understanding the achievement gap.

Jennifer Miller, Department of Sociology

Faculty Mentor: Dr. Michael Thompson, Department of Sociology

Title: The Macho Man Paradigm: Investigating Hypermasculinity and Class

Objectives: Hypermasculinity is a term that is used to describe exaggerated aggressive behavior exhibited by men and boys as a result of being socialized to believe that men are supposed to behave a certain way (Mosher & Sirkin 1984). Men who score high on the hypermasculinity index are more likely to commit intimate-partner violence, such as assault and rape (Guerrero 2009). The question posed in this research asks if hypermasculinity changes based on class.

Methods: I have made use of secondary data analysis of data collected by the United States Census Bureau, the General Social Survey, the International Dating Violence Study, the Federal Bureau of Investigation, along with other pertinent databases, all sourced from ICPSR. Expected

Findings: Findings may reveal that socioeconomic status and race affect hypermasculine tendencies. **Conclusion:** By conducting this analysis, we will be able to generate new strategies to combat violence against women, as well as against sexual and gender minorities.

Yacine Ndiaye, Department of Biological Sciences, Honors College

Faculty Mentor: Dr. Jam Duban, Honors College

Title: Psychologically Rather than Physically Dismembered: Reconsideration of Self-conception in *Native Son* and *Moby-Dick*

What can possibly link Melville's *Moby-Dick* and Richard Wright's *Native Son* in ways that go beyond the insights of existing scholarship on that topic? This paper explores correspondences between these novels through the characters of Captain Ahab and Bigger Thomas. I concentrate on similarities in the areas of race and revenge. As they pursue their nemeses, Bigger and Ahab seek power, regrettably as the key to life's meaning. Still, Bigger's death is meaningful; Ahab's, less so. I also suggest that Melville's nineteenth-century masterpiece may have inspired vital dimensions of *Native Son*, and specifically in ways that go beyond the impressive findings of Elizabeth Schultz.

Christopher Otis, Department of Geography

Faculty Mentor: Dr. Waqar Ahmed, Department of Geography

Title: Investigating the Relationship between the Political-Economy of Coltan and Social Unrest/Violence in the DRC

The Democratic Republic of the Congo (DRC) has been ceaselessly exploited for its resources for over a century, leaving the nation in a state of extreme impoverishment and violence. While the existence of a "resource curse" is not universally accepted and may not be applicable in all cases, it would be hard to argue that the DRC's resource-abundance has not been a curse throughout its history. Using the conceptual framework of the "resource curse" theory, this research answers the following question: What is the relationship between the political-economy of coltan (a metallic ore) and social unrest/violence in the DRC? I have undertaken a quantitative analysis, covering the years 2000-2012, of the relationship between social unrest/violence and a

political economy grounded in coltan. The analysis uses refugee data from the UNHCR as a proxy for social unrest/violence, and mineral export data from the USGS. Archival research is also performed for the 2000-2012 period and analyzed using discourse analysis.

Will Primrose, Department of Geography

Faculty Mentor: Dr. Waqar Ahmed, Department of Geography

Title: Rock Climbing and Its Intersections with Race and Class

The narrative of the American rock climber has been historically dominated by white males. As participants of outdoor-adventure recreation, rock climbers are in a realm of leisure which is (a) mostly experienced by white people and (b) located outside urban space. Through interviews, reflection of personal experience, and dialectical examination, I justify the assertion that motivations to participate in outdoor rock climbing are constructed by relations of race and class. This project is aimed to deconstruct constraints to participation for people of color.

Aaron Raper, Department of Biological Sciences

Faculty Mentor: Dr. Waqar Ahmed, Department of Geography

Title: The Trinity River Corridor Project: Genuine Intentions or a "Green" Trojan Horse

This research examines the revitalization of the Trinity River Corridor Project (TRCP). The TRCP has been in motion for more than a decade. Much debate has centered around the details of this “revitalization,” yet the original focus of the project has morphed from the high ideals of sustainability development to the capital-centric notions of economic growth and accumulation of wealth. The innate goal of capitalism is growth and profit. Transforming the nature of the Trinity River presents an example of how social powers utilize the idea of ecological modernization in order to market “sustainable growth.” The Trinity River Project presents a “Green” Trojan Horse masking the continued growth and transformation of nature to a commodity. Featuring discourse analysis as a methodology to examine the political economy for TRCP, this project will highlight the seductive power of the rhetoric of revitalization and infrastructural development in garnering public support for the project in the city of Dallas. I shall also examine the strategy used to covertly abandon earlier goals to reduce the enterprise to a project focused on constructing a toll way through the area for the benefit of a select few in the DFW area.

Christianna Reyes, Department of Art Education and Art History; Honors College

Faculty Mentor: Dr. Kelly Donahue-Wallace, Department of Art Education and Art History

Title: Erasing Mexico. *Notes on the Upper Rio Grande*: Documentation for the Sake of Future Exploitation

The political theory of Manifest Destiny led Americans to think they had the right to expand their land to spread democracy. Leading up to the Mexican-American War, the U.S. tried to acquire lands from Mexico. After Texas was annexed in 1845 and the Rio Grande River was made the border between it and Mexico, the government commissioned explorations into this newly acquired land. Bryant Tilden’s *Notes on the Upper Rio Grande*, written in 1847 and published by Lindsay and Blakiston, is a travel journal written to survey the Rio Grande River in order to determine the possibility of military steamboat transportation. This book details the

encounters between Tilden and the Mexican people, with a lithograph map by Thomas Sinclair. This paper argues that Bryant Tilden's *Notes on the Upper Rio Grande* misrepresents Mexicans in order to justify U.S. superiority. By using postcolonial theory and the theory of orientalism, I will examine the text and images in Tilden's *Notes on the Upper Rio Grande* in order to analyze misrepresentations of Mexicans.

Trenton Rich, Integrative Studies

Faculty Mentor: Dr. Jesús Rosales-Ruiz, Department of Applied Behavior Analysis

Title: Enabling Potential in Education

When I examine my scholarly life, I see many inefficiencies within the system of education. Subjects are taught quickly but not retained, while choices and contest are excluded from activities. I find these patterns to be correctable. A true education, one driven by the student, must be tailored to an understanding of the student. All students have strengths and weaknesses, for even a man, known in research as "S," who had perfect memory and could had no trouble going through school, had the disability of figurative thought. He imagined everything in an extremely literal fashion, and so could not grasp even simple ideas. I find it important to capitalize on strengths to a point of compensating for weakness. This mode of philosophy promotes individuality and diversity. An education system created with this idea in mind would be cheaper and more effective. In my goals of installing such a system, certain steps must be taken to understand the development of human individuality and its limits. To do this I am embarking on research that will run sample systems on existing students, to discover techniques and efficiencies in creating individualistic patterns and thoughts. While I have undertaken considerable observation of these tendencies through my life, I will resist from making any major conclusions until proper research has reared conclusive results. The experiment will use a number of students at UNT as subjects. These subjects will undergo testing to determine their core thought patterns. These patterns will be enhanced through conditioning and image modification. Sessions lasting an hour or more on a timely basis will serve as time for such installment. Results will be based on the subject's consistency of expression and coherence of ideas, even if those perceptions are grounded in false pretense. More simply, positive results shall be associated with growth of depth of understanding of the subject's own thoughts and beliefs. Subjects' arguments will be translated into logical arguments and examined for fallacies and inconsistencies. Consistencies will be counted as well as valid and invalid arguments. The results will hopefully provide knowledge as to young adults' ability to grow mentally.

Molly Riddell, Department of English; Honors College

Faculty Mentor: Dr. James Duban, Honors College

Title: The Equal of Them: Violence and Equality in *Native Son* and *The Man Who Was Almost a Man*

What is implied when an author places two unrelated characters in the same unsolvable paradox? Does this shared plot device suggest an inherent relationship between the two stories? This study seeks to answer these questions with regard to Richard Wright's *Native Son* (1940) and *The Man Who Was Almost a Man* (1963). In both narratives, the author creates a paradox in which the protagonist resorts either to direct or indirect violence to prove his equality. Still, in doing so, he merely strengthens the negative image society ascribes to him. The study draws on the

interpretations of key political figures such as Martin Luther King and Barack Obama to suggest that Wright's works advocate nonviolence.

Matthew Rudy, Department of Art Education and Art History

Faculty Mentor: Dr. Kelly Donahue-Wallace, Department of Art Education and Art History

Title: Analysis of Images in Mexican-American War Literature

Tensions between Mexico and the United States, both politically and socially, over land divisions, created racial prejudices. The Mexican-American War over the annexation of Texas provided fuel for new animosities in depictions of Mexicans in images and narrative literature within U.S. culture. John Frost's *The Mexican War and its Warriors* (1848) and other contemporary representations portray Mexicans as weak and untrustworthy cowards. My research uses theories of post-colonialism and orientalism to argue that John Frost's pictorial images and narratives of Mexicans were used as historical justifications for the intervention into Mexico.

Ernest Sanchez, Department of Linguistics; Honors College

Faculty Mentor: Dr. Konstantia Kapetangianni, Department of Linguistics

Title: Teaching Grammatical Gender in German through Mnemonics

This study focuses on using aural mnemonics to teach grammatical gender to students learning German as a second language. Previous research showed that visual mnemonics, such as associating colors with gender, can improve students' ability to retain grammatical gender. In this study, by testing individuals with no prior knowledge of German, we examined the contribution of aural mnemonics in the acquisition of grammatical gender in German nouns. We used a control and experimental group, both receiving the same list of 15 German words. Each group had 15 minutes to study the list, with the experimental group having the last 5 minutes to study with 15 audio files, which had a separate mnemonic applied to each noun-based on gender difference. The participants were given the same pre- and post-test, and scored based on improvement. Preliminary results show that aural mnemonics do not increase students' ability to retain grammatical gender.

Laura Sanders, Department of Political Science; Honors College

Faculty Mentor: Dr. Tom Miles Honors College

Title: Forsaken Children: Medicaid Budget Cuts and Children with Disabilities

The 84th Texas Legislature recently passed budget cuts to Medicaid that, through services such as Early Childhood Intervention (ECI), will directly affect home- and community-based therapy programs provided to low-income children with disabilities. Numerous studies have concluded that intervention services provided by ECI yield vast benefits, including long-term cost-benefit; however, no significant research has explored the consequence of the absence of ECI. In this paper, I will examine the trickle-down effect. I argue that the buck stops in the lap of local independent school districts at a great opportunity cost to the child with disabilities. This study will contribute to the comparative research of potentials and outcomes for children with disabilities. I will also provide new insights into administrative restructuring and policy changes

that may provide a funding and governing alternative for ECI to ensure the future success of our children in need.

Jacqueline Sears and Keyona Butler, Mayborn School of Journalism

Faculty Mentor: Dr. Koji Fuse, Mayborn School of Journalism

Title: Toshiba vs. Corporate Governance

The Toshiba Corporation has been in service for over 140 years. This case study examines the financial and accounting problems within Toshiba. With regard to the recurring issue of the functioning of Japan's corporate governance system, our research focuses on issues Toshiba will face if it does not reform and improve its corporate governance and fiscal accountability. While this scandal will also affect the Japanese government for the next couple of years, Toshiba must continue to enforce major internal reforms and deal with the financial fallout of the revelation of its systematic accounting fraud.

Patrick Schaab, Department of English; Honors College

Faculty Mentor: Dr. Tom Miles, Honors College

Title: Teaching New Dogs Old Tricks: The Use of Millennia-Old Teaching Techniques in a Modern Globalized World

In a rapidly globalizing world, more American teachers are deciding to teach overseas to receive more money, easier living, and greater experiences. However, the vast majority of these teachers travel abroad with relatively little experience in cross-cultural interactions and education, despite the best efforts of TOEFL and TESOL courses offered at many universities. Additionally, many curricula brought abroad use expository learning techniques common to American classrooms with little regard for host-culture understanding of education. My research leads me to propose an expansion in teacher training in the arena of storytelling, which is a teaching medium common to every known culture, whether those be literate or illiterate. By equipping teachers with storytelling techniques, educators can better instruct diverse populations both at home and abroad, and with increased confidence and efficacy.

Rachel Torres, Department of Political Science; Honors College

Faculty Mentor: Dr. Jim Duban, Honors College

Title: Through His Eyes: Critical Analysis of Wright's *Native Son* and Dostoyevsky's *Crime and Punishment*

This project establishes a firm connection between the narrators of Richard Wright's *Native Son* and Fyodor Dostoyevsky's *Crime and Punishment*. I do so through an analysis of narrative compatibility of both works as that pertains especially to the composition process of *Crime and Punishment*. Prior scholarship oversimplifies comparison of the two texts. This study offers a more nuanced juxtaposition of these works by suggesting that *Native Son* is something of a latter-day adaptation of *Crime and Punishment*—most importantly, as pertains alike to aesthetics and narration.

Lauren Wieland, Department of Biological Sciences Honors College
Faculty Mentor: Dr. Tom Miles, Honors College
Title: Spread of Canine Distemper Virus in Large Felines

The canine distemper virus (CDV), which is infecting large canines across the world, is most prevalent across Asia. Various forms of transmission exist, with varied viral strains and modes of transmission peculiar to geographical location. No one is sure why the virus moves in a seemingly random pattern and why it is infecting both captive and wild animals. CDV is wiping out endangered lion and tiger populations, both of which are crucial to the environment. The virus therefore merits scientific study to slow the extinction of these species. I aim to demonstrate that spatial mapping of the virus and its host populations will better define necessary steps toward dealing with CDV.

Hannah Wilson, Department of Art Education and Art History; Honors College
Faculty Mentor: Dr. Kelly Donahue-Wallace, Department of Art Education and Art History
Title: Hubert Howe Bancroft: Behind the Façade of a Professional Historian

Since before the Mexican-American War, ingrained notions of American superiority over Mexicans appeared in narratives of Texas. This paper argues that Hubert Howe Bancroft, although referenced as an unbiased, realistic historian of Texas history in *The Works of Hubert Howe Bancroft XVI: The History of North Mexican States and Texas volume 2*, actually coded his narrative with images and text of United States' social dominance over Mexico. Using the lens of postcolonial theory, my research method performs facilitates (1) a close reading of the eleven illustrations and the accompanying text, (2) a comparison with primary cartographic sources, and (3) an analysis of early historians' tropes of Texas to examine the crafted historical narrative and function of images. I conclude that, using manifest destiny in Austin's colony maps, and the use of empathy in maps describing emotional military losses, Bancroft's scientific Texas narrative is coded with United States' Anglo American moral and political superiority.

Angela Yin, Department of Psychology; Honors College
Faculty Mentor: Dr. Chiachih DC Wang, Department of Psychology
Title: Moderation Effects of Cultural Self-Construal on Attachment and Romantic Relationship Quality

Romantic relationships during the time of emerging adulthood play an important role in both the immediate and later well-being of an individual. Literature has consistently shown that romantic-relationship quality is heavily influenced by adult attachment. In addition, preliminary research suggests that particular behaviors related to people's cultural self-construals are associated with their experiences in close relationships. The present study explores the possible moderator effects of cultural self-construals on the relationship among attachment and three indicators of romantic relationship quality (i.e., intimacy, satisfaction, and commitment). To that end, I use a sample of college students in the age range that represents the emerging adult population. Specific hypotheses, proposed research methods, ethical considerations, and planned data analyses are discussed in the proposal.

David Yuan, Texas Academy of Mathematics and Science

Faculty Mentor: Lei Chen, Georgia Southern Information Technology

Title: A Routing Algorithm with Path Randomization for Enhanced Security and Balanced Energy Consumption

Abstract: Routers are located at the core of communication networks, such as the Internet and sensor networks. The routing algorithms deployed in routers have a profound impact on network security. The traditional shortest-path algorithm used in OSPF, and other routing protocols are inherently vulnerable to certain types of attacks. These routing algorithms also influence the life span of the switches and routers with high sensitivity to energy consumption. In this paper, we address these challenges by developing a novel routing algorithm with a randomization process so that packets are sent through optimal yet less predictable paths. We expect this process to increase network defense against eavesdropping and jamming attacks, and also to improve the energy consumption in sensor networks and similar ad hoc networks.

ABSTRACTS FOR RESEARCH POSTERS

Alex Anderson, Sarah Foglia and Tomas Aguayo, Department of Art Education and Art History

Faculty Mentor: Dr. Kelly Donahue-Wallace, Department of Art Education and Art History

Title: Instagraming Voter Impressions: The Influence of Instagram on The 2016 Presidential Campaign

In 2000, Verser and Wicks evaluated the visual strategies and themes employed by presidential candidates through official website images to assess whether or not they influenced voter impressions. Their results, published in the article, *Managing Voter Impressions: The Use of Images in Presidential Candidate Web Sites During the 2000 Campaign*, revealed that differences existed in the way imagery was used on the websites. The purpose of our study is to update and advance the 2000 research of Verser and Wicks based on Instagram imagery. Our research brings the impact of social media into the 2016 presidential campaign. This study examines images of the presidential candidates from the shoulders up that employ clear representations of visual strategies or nonverbal cues, eliminating fragmenting views and text. While the research is currently in progress, we expect to find that significant differences do not exist in the ways imagery is employed on the official Instagram accounts of leading candidates, Donald Trump, Ted Cruz, Marco Rubio, Bernie Sanders and Hillary Clinton in the 2016 presidential campaign. However, the presidential candidates do appear to employ different strategies to enhance or highlight the stature of the candidates using Instagram.

Rebekka Auer, Department of Audiology and Speech-Language Pathology; Honors College

Faculty Mentor: Dr. Tom Miles, Honors College

Title: Phonological Language Acquisition in German and English Speaking Monolinguals

How do language phonetics influence language acquisition in children under eight years? Every language is different. The same is true of the phonetics of a specific language. There have been only few investigations of how the phonetics of a language can influence the age at which a language is learned by a child under eight. Do phonetics matter? Or can we assume that children learn their first language at the same pace? In my paper I seek answers to those questions by taking an example from English- and German-speaking children and compare their time frame of language acquisition. To achieve this I consult past research, while personally conducting a survey in both countries.

Lance Autry, Shannon Albracht and Brianna Glass, Department of Art Education and Art History

Faculty Mentor: Dr. Kelly Donahue-Wallace, Department of Art Education and Art History

Title: Smirks, Smiles, and Body Language: The Impact of Nonverbal Behavior in the 2016 Presidential Primaries

This study reprises the 2009 content analysis of presidential candidate televised nonverbal communication as originally examined by Stephen Banning and Renita Coleman in their study of the 2000 presidential campaigns. The purpose of this study is to perform a content analysis of the televised nonverbal communication of the 2016 presidential primaries. News broadcasts of the three major networks, ABC, NBC, and CBS will be examined to determine if facial expressions, appearance, and nonverbal behavior help or hinder candidates, and if any media bias exists in the portrayal of the candidates of the various parties. Data from previous studies lead us not to expect to find any media bias based on party affiliation; but, due to the contentious nature of the Republican primary race versus that of the Democrats, we expect to find a greater number of potentially negative nonverbal shots of Republicans than of those of their Democrat counterparts.

Rahat Aziz, Amal Farooq, Sarah Ibrahim and Mahnoor Malik, Department of Biological Sciences; Honors College

Faculty Mentor: Dr. Lee Hughes, Department of Biological Sciences

Title: Mass spectrometry analysis of phage “Samisti12” proteins

This research analyzes the unknown protein composition of a recently discovered phage, Samisti12. It infects the bacterial host *Streptomyces griseus*, which is commonly found in soil and whose strains are well known producers of antibiotics. To analyze the protein content, we are employing mass spectrometry as our methodology. Through mass spectrometry, we intend to reveal the presence of proteins in Samisti12 and articulate the phage’s structural components.

Haley Barnes, Department of Materials Science and Engineering; Honors College

Faculty Mentor: Dr. Nandika D'Souza, Department of Mechanical and Energy Engineering

Title: Biodegradable Coaxial Polymer Scaffold Drug Delivery System for In Vivo Soft Tissue Repair

Poly(butylene adipate-co-terephthalate) (PBAT) is a biopolymer that has been shown to be biocompatible. In a collaborative study with Venu Varanasi, the polymer team from UNT has established a unique preparation methodology to support cell viability in the PBAT systems. In this project we couple the work we have established on polymer mesh production with that of our work on nanoplatelets for drug release. Fibers will be electrospun using a PBAT and synthesized nanoplatelet that has ibuprofen. The fibers will then be monitored for drug-release

rates and efficiency. Fibers will then be foamed, and the efficiency of both will be compared by Baylor A&M and UTSW researchers.

Teah-Marie Bynion, Department of Psychology; McNair Scholars Program

Faculty Mentor: Dr. Heidemarie Blumenthal, Department of Psychology

Title: The Link between Specific Parenting Behaviors and Social Anxiety among Female Adolescents

Social anxiety (SA) disorder is the second-most prevalent mood/anxiety disorder among adolescents. A growing body of work has sought to clarify the etiology of anxiety problems among youth, highlighting both genetic and environmental factors. One environmental factor that rises to the forefront is the parent-child relationship. Theoretical evidence suggests that dimensions of parenting may relate to adolescent SA, yet limited work has examined these relations. Based on prior findings, we expected psychological control and anxious parenting to relate most strongly to higher levels of SA. The current study examined relations among specified parenting styles for both mothers and fathers (i.e. psychological control, anxious parenting, warmth) in relation to SA symptoms among adolescent girls. Results indicated that certain indices (e.g., control) are associated with SA symptoms among offspring. Findings will be discussed in terms of research and clinical efforts aimed at clarifying the role of parental relations in adolescent social anxiety.

Landon Cowan, McNair Scholars Program

Faculty Mentor: Dr. Karen Toussaint, Department of Behavior Analysis

Title: Evaluation of a Computer-Based Training Package on Novice Instructors' Implementation of Discrete-Trial and Naturalistic Instructional Techniques

The current evaluation assessed the effects of a computer-based training package to teach novice behavioral therapists to implement discrete-trial instruction (DTI) and a naturalistic developmental behavioral intervention (NDBI). A multiple-baseline design across two trainee-child dyads indicated that training resulted in improved implementation of both instructional techniques for trainees. In addition, increases resulted in trainees' performance across untrained DTI programs during generalization sessions following training on one DTI program. Improvements in child behavior were also demonstrated as child-participants' language increased in correspondence with therapists' fidelity to naturalistic instructional techniques.

Bunyong Dejanipont, Department of Psychology; Honors College

Faculty Mentor: Dr. Mark Vosvick, Department of Psychology

Title: Negative Social Exchange, Perceived Stress and Mindfulness; Correlates of Resilience in a LGBT Sample

Psychological research extensively documents higher resilience in LGBT individuals, although these individuals experience stress and negative social exchanges; the role between these factors and mindfulness in this population is not well understood. We hypothesize that negative social exchange and perceived stress negatively correlate with resilience in LGBT participants, while mindful observance positively correlates with resilience. One hundred and fifty-five participants recruited from Dallas-Fort Worth completed (1) the Test of Negative Social Exchange (Ruehlman & Karoly, 1991), (2) the Perceived Stress Scale (Cohen & Kamarck, 1983), (3) the Connor-Davidson Resilience Scale (Connor et al., 2003), and (4) the Kentucky Inventory of Mindfulness Scale (Baer, Smith, & Allen, 2004). A hierarchical regression analysis found negative social exchange and perceived stress to correlate negatively with resilience ($\beta = -.26$, $p < .01$, $\beta = -.53$, $p < .01$ respectively), and mindful observance to correlate positively with resilience ($\beta = .38$, $p < .01$). Our findings suggest that stress reduction and positive reframing of negative interactions may help LGBT individuals build resilience.

Isabel Delwel, Department of Linguistics; Honors College

Faculty Mentor: Dr. Sarah Crowder, Department of Linguistics

Title: ***Flawless Beyoncé: An Analysis on Influence and Modern Language Change

Language is diversifying and changing rapidly from the influence of pop culture, technology, and social media. One of the most influential modern pop culture icons is Beyoncé Giselle Knowles-Carter. Throughout her career, Beyoncé has used her music as a gateway to speak on various issues, beliefs, and ideas. An analysis on the way language development affects words and phrases in Beyoncé's top hits was conducted. Beyoncé's recent single, *Formation*, has defined her stance on political activism. It is predicted that Beyoncé will continue to emphasize the themes of power, social justice, and activism in her upcoming album. Based on her international influence, all the analyzed words and phrases will increase in use and development. Young adults and active social media users will be most affected by this language. The words will be used for the greater purpose of aiding and influencing those who are uninformed about national and global injustices and politics.

Amanda Ekery, Jazz Studies; Honors College

Faculty Mentor: Dr. Tom Miles, Honors College

Title: Solo Vocal Arranging

Vocals have been prominent in the jazz repertoire since its inception. Lyrics helped craft the blues and have grown into a key element of the great American songbook. Educational material

and instruction on vocal arranging techniques has, however, not been as prominent. While a large library of instrumental arranging fundamentals and techniques exists, little about how to approach arranging for the solo singer. I aim to highlight some arranging techniques used in solo vocal jazz repertoire and illustrate how each is implemented. I shall do so by analyzing five different solo vocal arrangements by well-known artists from different time periods. Moreover, by arranging a solo piece myself and explaining the process, I shall discuss key considerations that figure in arranging for a vocalist. I believe that few studies exist about solo vocal arranging because of such considerations as lyrics, range of the individual singer, and the overall concept of the arrangement and the vocal ability of each singer. For these performers, the body is the instrument and all singers have a different anatomy that affects their instrument, unlike a piano or tenor saxophone. I aim to explain that the majority of arranging concepts overlap between instrumentals and vocals, and that only a few key elements need to be taken into consideration when writing for vocals.

Tabitha French, Department of Psychology

Faculty Mentor: Dr. Craig Neumann, Department of Psychology

Title: Gender Differences in Facial Recognition Accuracy in Individuals with Psychopathic Traits

Due to discrepancies in current literature this study explored variations in the manifestation of the deficits between genders in facial recognition and their relationship to the factors of psychopathy. A bivariate correlation was conducted in order to increase understanding of a topic that lacks significant research. We hypothesized that there would be different correlations between men and women regarding the relationship between accuracy on facial expressions and psychopathic traits. The results of the study determined that both genders' antisocial behavior scores displayed a significant negative correlation for the total score on the facial recognition task. For specific emotion scores, female antisocial-behavior scores were discovered to be negatively associated with recognition of sad faces while male antisocial-behavior scores were negatively associated, in consistent measure, with recognition of disgusted faces. With greater knowledge about the influences of these relationships, treatment methods could be developed to correct these deficits.

Ronny Gale, Department of Biological Sciences; Honors College

Faculty Mentor: Dr. Rebecca Dickstein, Department of Biological Sciences

Title: Transcriptional Control of Vasculature Development of *Medicago truncatula* Nodules

In legumes experiencing nitrogen deprivation, symbiotic nitrogen-fixing root nodules form, with rhizobia housed within specialized nodule cells. The rhizobia reduce nitrogen to ammonia that they exchange for photosynthate from the host plant. Such nutrient exchange depends on a properly developed nodule vascular system. In the model legume *Medicago truncatula*, when the

function of MtbHLH1, a basic helix–loop–helix (bHLH) transcription factor gene, was altered, nodule vasculature changed and plants showed evidence of reduced nutrient exchange [Godiard 2011. *New Phytol.* 191:391]. We identified a *M. truncatula* Tnt1 insertion MtbHLH1 mutant that shows defects in nodule vascular patterning. A transcriptomic analysis identified a putative transcription factor gene in the homeodomain-leucine zipper (HD-ZIP) family that is mis-regulated in the MtbHLH1 mutant, leading to the hypothesis that HD-ZIP is downstream of MtbHLH1. A Tnt1 insertion mutant in the HD-ZIP gene shows no phenotype, otherwise expected if MtbHLH1 represses HD-ZIP. To test this hypothesis, we sought to create a double mutant by crossing single mutants with MtbHLH1 and HD-ZIP defects [Veerappan 2014. *Plant Methods* doi:0.1186/746-4811-10-11]. We grew an F2 population resulting from the cross and used zygosity tests as a primary screen to identify double mutants. Plants determined to be HD-ZIP *-/-* were subjected to genotyping for the defective MtbHLH1 gene. Plants that presented a HD-ZIP *-/-* and MtbHLH1 *-/-* genotype were subjected to additional genomic DNA extractions, and PCR-based zygosity tests were conducted with a range of primers to yield high confidence in the plant's genotype. An F3 population was grown from selected prospective double mutant F2 plants to confirm the genotype in the F3 plants. These will be used in phenotypic analysis.

Cynthia Garcia, Department of Biological Sciences; Honors College

Faculty Mentor: Dr. Lee Hughes, Department of Biological Sciences

Title: Comparative Analysis of Streptomyces Bacteriophages OlympicHelado and Rima

Bacteriophages are viruses which infect bacteria. The isolation of bacteriophage (phage) and its subsequent study is imperative for the furthering of genomic sequencing and phage therapy. Through the SEA-PHAGES program at the University of North Texas, two unique phages were isolated from the same soil sample via two different host bacterium. OlympicHelado was isolated on host *Streptomyces griseus*; Rima was isolated on host *Streptomyces azureus*. Both bacteria were sequenced, annotated, and organized into the BI cluster. A comparative analysis of OlympicHelado and Rima, which make up two of three phages in the BI cluster, was conducted. OlympicHelado has a total genome length of 56189 basepairs (bp) and a total CG content of 59.5%. Rima has a total genome length of 56168 bp and a total CG content of 59.6%. OlympicHelado and Rima both have 9 bp 3' sticky overhang length containing the following sequence: CGCCCGCCT. OlympicHelado and Rima are 94.32% homologous and share correlating synteny.

Craig Green, Department of English; Honors College

Faculty Mentor: Dr. James Duban, Honors College

Title: Henry Whitney Bellows and The Rhetoric of Manifest Destiny: Providential History, Nationalism, and Solidarity

I am conducting research to determine how, in the 1850s, minister Henry Whitney Bellows (1814-82) capitalized on America's increasing prosperity following the Mexican–American War of 1846-48. He did so by appropriating the popular rhetoric of manifest destiny and providential history to promote his own inclusive brand of Unitarianism. I am conducting this research largely through the careful study of *The Christian Inquirer*, a New York Unitarian newspaper for which Bellows was either the lead editor or a contributor from 1848 to 1857. *The Christian Inquirer* remains almost unexplored by scholarship and offers the opportunity closely to examine the reactions to contemporary events expressed in the newspaper writings and sermons of one of the leading men in American Liberal Christian history. I am conducting this research this under the guidance of Dr. Duban, with the aid of his class on American intellectual history, and with access to his repository of primary materials concerning Bellows and *The Christian Inquirer*.

Ke'Yonna Hall, Department of Criminal Justice

Faculty Mentor: Mr. Zachary Powell, Department of Criminal Justice

Title: Living with Television: A Re-Examination of Cultivation Theory by Analyzing the Impact of Perceived Realism and Legal Shows

Over seventy years since its invention, television maintains a controversial presence in American culture, hypothesized by Gerbner to have a profound effect on human attitudes and behavior. According to Gerbner, overuse of television is creating a homogeneous and fearful populace. The suggestion is that television shows that overtly display fear of crime will correspond to a fear of crime in the public. Through a television content analysis of *Law & Order: SVU* shows—including production limitations, portrayals of women and ethnic minorities, and amounts of violence—this study seeks to determine the degree to which fear of crime is presented through dramatic experience. Potential findings may indicate that viewing crime shows exaggerates fear of crime and suspicion of people and their motives. This study would be an important step in understanding effects of legal shows on perception and could be used to further develop existing cultivation literature.

Rusty Hartman, Department of Biological Sciences; Honors College

Faculty Mentor: Dr. Lee Hughes, Department of Biological Sciences

Title: The Discovery of Streptomyces Bacteriophage, "Bioscum"

Early findings of bacteriophages have been helpful in identifying the characteristics and many uses of phages. This, in turn, has helped with the finding of a Streptomyces bacteriophage known

as Bioscum. This phage was collected through a soil sample from Canyon, Texas, and then isolated on the host, *Streptomyces griseus*, through enrichment of the soil sample. Bioscum was then purified to give individual plaques. These plaques were round and one millimeter in diameter. Electron Microscopy determined that the estimated diameter length of the capsid was 600 nm, and that the estimated length of the tail was 1,400 nm. Bioscum's genetic DNA was then extracted through electrophoresis. This helped in sequencing the phage to determine its characteristics and results from the archiving in Pittsburgh, Pennsylvania. Archiving showed that Bioscum was in class BC and in subclass BC3, with another phage, PapayaSalad. Bioscum was annotated to discover possible characteristics and genes encoded in its genetic material. Its genome length was 37,380 bp, and the genome was circularly permuted. There were approximately 53 genes coded for Bioscum. This study suggests that Bioscum might help in the creation of new antibiotics to combat bacterial diseases.

Kristin Henderson, Julie Clidiere, Torrie Sanford and Maddison Cecil, Department of Art Education and Art History

Faculty Mentor: Dr. Kelly Donahue-Wallace, Department of Art Education and Art History

Title: Is Your News Source Impartial? The Question of Bias in the 2016 Presidential Campaign

This study updates and modernizes the article *Newspaper Photographs 1996 Presidential Election: A Question of Bias* by Paul Waldman and James Devitt. We ask the question: Is there liberal bias in the 2016 Presidential Election coverage as seen in news photographs? Our content analysis uses a three-day sample of online article news photographs, found on yahoopolitics.com, of the top 2016 Republican and Democratic candidates. While research is currently underway, we expect our study to show Republican candidates more negatively portrayed than Democratic candidates in news images.

Ricki Hurtado, McNair Scholars Program

Faculty Mentor: Dr. Karen Toussaint, Department of Behavior Analysis

Title: A Contingency Analysis of Therapist and Child Social Behavior Following a Conditioned Reinforcement Procedure

We conducted a contingency analysis to evaluate if a sequential relation between social initiations and positive social responses increased for therapists, and for children with autism, following a conditioned reinforcement procedure. Participants included dyads consisting of a child and therapist who were previously identified as having low rapport. These dyads were observed prior to and following an intervention designed to condition the therapist's social behavior as a reinforcer. Sessions consisted of unstructured play between the therapist and child. Results from a Yule's Q analysis show that, following intervention, both the child and adult responded more positively to the other's social initiations. These data highlight the reciprocal effects of therapist-child interactions as well as the effectiveness of establishing social attention as a reinforcer via an operant discrimination training procedure.

John Keller, Ashley Olsen and Brandi Morrow, Department of Art Education and Art History
Faculty Mentor: Dr. Kelly Donahue-Wallace, Department of Art Education and Art History
Title: What They Say vs. What They Do: Verbal and Nonverbal Elements of Televised Presidential Image and Issue Ads

This study examines televised ads from the 2016 presidential election, between the dates of October 1st 2015 and March 31st 2016. Specifically, we focus on the verbal and nonverbal elements of televised sources as a way of understanding how these characteristics describe key aspects of image and issue ads. In this study, a content analysis was performed of 6 televised political ads from each of the leading presidential candidates; Donald Trump, Ted Cruz, Marco Rubio, Bernie Sanders, and Hillary Clinton. We predict that nonverbal elements of televised ads will be more descriptive in image ads, and verbal elements of televised ads will be more descriptive in issue ads.

Christina Kenny, Department of Geography, Honors College
Faculty Mentor: Dr. Lisa Nagaoka, Department of Geography
Title: Influences of Geologic and Land Use Characteristics on Urban Forest Distribution in Denton, Texas

Urban forests play vital roles within communities by providing important ecosystem services. Understanding an urban forest's structure, function, and value can facilitate management decisions aimed at improving these services. Denton, Texas, has recently prioritized efforts to better manage its urban forest development. A canopy assessment was conducted in 2010 that estimated coverage to be 18.6%. Building on that dataset, the project goal is to understand better Denton's urban forest by identifying canopy distribution, by determining its relation to the underlying geology, and by evaluating different land-use influences. Since future canopy growth and loss depends on future land-use changes, combined with the underlying geology, understanding the areas at risk of canopy loss and the opportunities for growth allows city planners to make better decisions about where to focus efforts to manage more efficiently Denton's urban forest.

Lizbeth Lopez, Stephanie Kelly and Dorothy Walker, Department of Art Education and Art History
Faculty Mentor: Dr. Kelly Donahue-Wallace, Department of Art Education and Art History
Title: Let's Tweet About It; Twitter as a Binding Medium in the 2016 Presidential Campaign

This project examines how Democratic candidates Hillary Clinton and Bernie Sanders use Twitter to converse with the voters. The study updates and modernizes, based on current media, the 2008 research of Steve Duman and Miriam A. Locher, as published in the article *So let's talk. Let's chat. Let's start a dialog*. Our research performs a content analysis of a 2016 sample of

Tweets from March 10, 22, 24, 2016 from Hillary Clinton and Bernie Sanders. It examines how they employ conversational language, phrases, and words to connect with the electorate and to reinforce their populist image. We expect to find how Democratic candidates utilize Twitter as a conversational exchange to connect with the electorate and reinforce their populist image.

Amber MacInnis, Department of Biological Sciences; Honors College

Faculty Mentor: Dr. James Kennedy, Department of Biological Sciences

Title: Abiotic and Biotic Factors Affecting Decomposition Rates of Tilapia

This study describes decomposition rates of fish and abiotic and biotic influences on their decomposition. Tilapia carcasses averaging 680 grams each were allowed to decompose in the riparian zone of a mid-order stream in north central Texas. The study began on January 31 and ended after 12 days because scavengers breached the cages and removed the fish. At test termination, fish were at the end of active decay. Accumulated degree days (ADD) were calculated based upon on-site temperatures. The first blow fly eggs were recorded on fish after 15 ADD. The first maggots were observed after 44 ADD. Third instar maggots began migrating after 110 ADD. Temperatures at the study site were warmer than those measured at the Denton Municipal airport (4.7 kilometers distance). This results in an additional 46- 70 ADD at the study site and illustrates the importance of onsite temperature measurements in forensic studies.

Michelle Mao, Department of Physics, Texas Academy of Mathematics and Science

Faculty Mentor: Dr. Yuankun Lin, Department of Physics

Title: Surface Plasmon Resonance with AZO Film with Tunable Nanoantennas

This study presents the implementation of a two-beam interference based holographic technique to fabricate large area periodic arrays of cylindrical hole nanoantennas in the transparent conducting oxide, Aluminum Zinc Oxide (AZO). These AZO nanostructures are capable of supporting surface plasmon resonances (SPR) that are strongly dependent on the size and structure of the material. Using the MEEP software program, we simulated the transmission spectra in order to analyze the effect of the array spacing, hole size, and film thickness. This research lays the groundwork for a fabrication technique that can contribute to the fundamental technology that will help integrate photonics and modern electronics through its large-area capabilities and extension into tunable conductive materials.

Amy Mayo, Department of Anthropology; Honors College

Faculty Mentor: Dr. Beverly Davenport, Department of Anthropology

Title: Sources of Power: The Give and Take of Islamophobic Rhetoric

This research endeavors to identify sources of Islamophobia by examining how political perspectives shape perceptions of Islam among civically engaged young adults in north Texas in relation to media exposure and current events. The concepts of consent through propaganda, with an emphasis on Orientalism and Orientalist rhetoric, will be used to examine the relationships between members of different political parties and how they conceptualize Muslims and the Middle East in relation to America and the “West.” Methodology was undertaken through an anthropological participant-observation approach in group settings and formal and informal interviews in individual encounters. I conclude that, although a sifting through and unveiling of rhetoric was necessary, Orientalist rhetoric persists to this day, as Islamophobia, among participants of political parties.

Kelly McFarland, Department of Anthropology

Faculty Mentor: Dr. Beverly Davenport, Department of Anthropology

Title: Food Tastes: An Examination into the Perceptions of Food in Families of Elementary Age School Children in North Texas

My poster illustrates research on factors influencing the development of children’s food perceptions and tastes. Via ethnographic methods including participant-observation, interviewing, and card sorting, I gathered and analyzed data on the dinner-eating styles of five families. This research is important because childhood obesity is on the rise and evidence suggests that obesity developed in childhood remains with a person their entire life. Four of the top ten leading causes of death in 2013 were attributable to diet-related illnesses, while the annual cost of these is estimated at \$190.2 billion. My research is a step on the path toward circumventing these trends. Food preferences are established in childhood, by and large; therefore our understanding how the preferences are formed gives rise to the possibility of intervening to teach children to make healthier choices.

Julissa Medina, Department of History; Honors College

Faculty Mentor: Dr. Tom Miles, Honors College

Title: What Does The Graffiti of Pompeii Say About Its Culture?

Analyzing graffiti can take us into the mind of the creator and most importantly provide insight into the surrounding culture. This study explores the culture of Pompeii through its wall art by focusing on the question, “How does graffiti represent its culture and what does it say about its people?” This study will analyze the root of graffiti, how graffiti was used in this era, and the type of people who engaged in it. The UNT library will facilitate a review of wide-ranging

sources. A detailed comparison of the sources will provide an explanation for the vulgar, raunchy graffiti found in this ancient city and reveal a city much like our own today.

Yacine Ndiaye, Department of Biological Sciences, Honors College

Faculty Mentor: Dr. Jam Duban, Honors College

Title: Psychologically Rather than Physically Dismembered: Reconsideration of Self-conception in *Native Son* and *Moby-Dick*

What can possibly link Melville's *Moby-Dick* and Richard Wright's *Native Son* in ways that go beyond the insights of existing scholarship on that topic? This paper explores correspondences between these novels through the characters of Captain Ahab and Bigger Thomas. I concentrate on similarities in the areas of race and revenge. As they pursue their nemeses, Bigger and Ahab seek power, regrettably as the key to life's meaning. Still, Bigger's death is meaningful; Ahab's, less so. I also suggest that Melville's nineteenth-century masterpiece may have inspired vital dimensions of *Native Son*, and specifically in ways that go beyond the impressive findings of Elizabeth Schultz.

Thomas Nelson, College of Business, Honors College

Faculty Mentor: Dr. Tom Miles, Honors College

Title: Privacy vs. Security: Analyzing Online Surveillance

Will privacy on the internet still exist in the near future if web security is becoming more prevalent? In a time when government is pushing a highly valued company for an easy method to track phones, regardless of any user consent, the question of encroachment on personal privacy is paramount. Previous research blames social networking for the decline in privacy as more individuals willingly post information online; however, a demand for privacy still exists. In this presentation, I will discuss the reasons why privacy is still highly valued and the opinions from both the government and citizens on whether privacy or security is more important. Using information from past cases, I will form a conclusion on possible ways to balance privacy and security to the overall satisfaction of the majority.

Cynthia Ponciano, Department of Psychology; McNair Scholars Program

Faculty Mentor: Dr. Chiachih DC Wang, Department of Psychology

Title: Attachment, Acculturative Stress, and Psychological Well-Being of Mexican-American Immigrants

Mexicans are the largest group of immigrants living in the U.S., accounting for some 11.4 million individuals (Pew Research Center, 2009). Despite the large number of persons in this population, they continue to remain understudied. The current study aims to increase our understanding of the psychological well-being associated with attachment and acculturative stress on Mexican immigrant adults in the U.S. I hypothesize that acculturative stress will mediate the relationship between insecure attachment and psychological well-being. Two specific variables were selected as the psychological well-being indicators in this study; they are psychological distress and life satisfaction. Archival data collected in the summer of and fall of 2015 will be statistically analyzed, and the results will be discussed based on attachment theory

and the adjustment process of Mexican immigrants. Findings of this study may contribute to the literature identifying the predicting factors of psychological distress and life satisfaction.

Aygul Porsyyeva, Department of Linguistics; Honors College

Faculty Mentor: Dr. Tom Miles, Honors College

Title: The Challenge of Second Language Acquisition: Children vs. Adults?

Learning another language is usually perceived as a daunting goal. Most people believe that, after they reach a certain age, they cannot become fluent in another language. That assumption leads to the failure to succeed in second-language learning among most adults. If we adults are smarter and more experienced than kids are, then why do we tend to think that kids are better than we at learning certain things? In this poster, I will guide you through neurological, psychological, and social analysis of second-language acquisition to judge the verity of the assumption that kids are better learners of second languages.

Cassandra Raley, Department of Biological Sciences, Honors College

Faculty Mentor: Dr. Lee Hughes, Department of Biological Sciences

Title: Collection and Isolation of Phage Tinker

Using *Streptomyces griseus* as a host bacteria, we collected and isolated a previously unknown bacteriophage. The results may supply future researchers with additional data on bacteriophages. Soil samples, collected from Grandview, Texas, featured a relative air temperature of 36.1 degrees Celsius. Collection date was August 22, 2015, and testing concluded December 2015. Procedures listed in the Streptomyces Phage Laboratory Manual were followed to complete the research. The three sections include: Capture, Tame, and Dissect. Isolation of a phage was obtained. A phage, Tinker, was isolated with an estimated genome size of 35kbp. The plaques were clear, circular, and one millimeter in diameter. Restriction digest and gels reflect similar findings congruent with several other isolations. Other students working on similar isolations at the same time resulted in isolating the same prophage, Chymera. The procedures did not result in finding an unknown phage, as intended; however, additional data on Chymera was collected. Prior to discovering that the phage isolated had been previously discovered, we named the new phage "Tinker." Contamination is the probable cause for Chymera to be the phage thus isolated.

Aly Ricci, Lisa Cruz and Carly Burdette, Department of Art Education and Art History

Faculty Mentor: Dr. Kelly Donahue-Wallace, Department of Art Education and Art History

Title: What a Joke! Stereotypical Characters in Cartoons of the 2016 US Presidential Election

In 2010, Eileen L. Zurbriggen and Aurora M. Sherman studied race and gender stereotypes in editorial political cartoons in the 2008 election. Their results in *Race and Gender in the 2008 U.S. Presidential Election: A Content Analysis of Editorial Cartoons* found that while cartoons of Obama reflected the most negative racial stereotypes, Clinton received the most negative gender-related and general portrayals. This study modernizes and updates Zurbriggen and Sherman's research. We examine the extent to which 132 editorial political cartoons between December 1, 2015 and February 30, 2016 from Cartoonistgroup.com exhibit racial and gender stereotypes toward 2016 presidential candidates. The cartoons that we analyzed feature candidates Hilary Clinton, Donald Trump, Marco Rubio, Ted Cruz, and Bernie Sanders. Before conducting research, we hypothesized the cartoons would feature the most negative gender

stereotypes for Hilary Clinton and Donald Trump, and the most negative racial and cultural stereotypes for Ted Cruz, Marco Rubio, and Bernie Sanders.

Molly Riddell, Department of English; Honors College

Faculty Mentor: Dr. James Duban, Honors College

Title: The Uncollected Letters of William Ellery Channing

Unitarian minister William Ellery Channing was a progressive nineteenth-century thinker keenly aware of the social ills of his time, including slavery and what came to be known as the "Woman Question," as the burgeoning Women's Rights movement began to occupy the national stage and conscience. One New York-based Unitarian publication, the *Christian Inquirer*, followed and reported with particular interest the development of the movement. This study brings to light three previously uncollected letters written by Channing between the years 1827 and 1829. These correspondences remained unpublished until 1849 when they appeared in the *Christian Inquirer* at the permission of their unnamed addressee. In these letters, Channing, long before the Seneca Falls convention (1848), and prior to the time when the editors of the *Christian Inquirer* brought attention to the subject, discusses the "superficial" nature of women's education in both Britain and the U.S. He suggests that these educational shortcomings stem from a larger social ill; indeed, Channing intimates that the educational system had failed young women because no specific end existed for which to educate them. Otherwise stated, women had, at best, an ambiguous social role with no definitive place in the public sphere. Consequently, their educations perpetuated aimlessness and superficiality.

In addition to suggesting a possible identity for the unnamed addressee, this study draws on these uncollected letters as well as on other articles from the *Christian Inquirer* to suggest that Channing's early progressive stance on the Women's Rights movement influenced the *Christian Inquirer's* future treatment of the subject by indicating the consistency of Women's Rights with the emphasis in Unitarian theology on human dignity across gender.

Kelsey Rodriguez, Department of Audiology and Speech-Language Pathology; Honors College

Faculty Mentor: Dr. Tom Miles, Honors College

Title: AAC Daily Use for Autism Spectrum Disorders

Augmentative and alternative communication (AAC) has helped tremendously in educational settings—such as those for students with cerebral palsy. However, relative to people on the autism spectrum, there is a limited review regarding AAC in a non-peer group setting. I will explore how AAC can help those with an autism-spectrum disorder to function on a daily basis, beyond an educational setting.

Atom Rosales, Department of Philosophy and Religious Studies; Honors College

Faculty Mentor: Dr. James Duban, Honors College

Title: Indictment through Coverage—Examining Wright's Representation of the *Chicago Tribune* in *Native Son*

Why, in *Native Son*, does Richard Wright utilize provocative yet historically authentic newspaper headlines and excerpts? How does this dimension of the novel's concerns and

narrative artistry affect our understanding of Wright's portrayals, in *Native Son* (1940), of the *Chicago Tribune* and newspapermen? I argue that the pervasive use of newspaper excerpts throughout the novel reflect the crude sensationalism evidenced in journalistic accounts of an actual crime—the Leopold and Loeb murder of Robert Franks in 1924. Via analysis of the *Tribune's* coverage—and its ramifications for the crimes of Bigger Thomas, in *Native Son*—Wright's newspaper depictions indict the *Tribune*. Whereas previous studies focus on parallels between *Native Son* and the Franks case, a paucity of commentary exists on the pertinence of the Leopold and Loeb murder case for *Native Son*. This study will involve documenting and analyzing the *Tribune's* coverage of Leopold and Loeb and then apply those findings to Wright's transformation of such newspaper coverage to representations in *Native Son*.

Gabby Segal, Department of Mathematics; Honors College

Faculty Mentor: Dr. Karen Toussaint, Department of Behavior Analysis

Title: Comparing Response Frequency and Response Effort in Reinforcer Assessments with Children with Autism

Assessment of whether a stimulus acts as a reinforcer draws, for the most part, on progressive ratio (PR) schedules that measure the number of responses an individual is willing to produce for an item while the number of responses required to receive that item increases. This study extends current literature by evaluating reinforcer assessments under another dimension of response in a progressive force (PF) schedule. We measured and compared responding in PR and PF schedules in a multi-element reversal experimental design for two individuals with Autism Spectrum Disorder.

Jewon Sohn, Department of Materials Science and Engineering; Texas Academy of Mathematics and Science

Faculty Mentor: Dr. Narendra Dahotre, Department of Materials Science and Engineering

Title: Laser Engineering of Ti 6Al-4V Stent for Enhanced Blood Flow Kinetics

Due to the rapid rates that patients undergo bypass revision surgeries to reverse the effects of arterial plaques, I concentrate my research on innovative stent designs that will eliminate restenosis (the recurrence of the narrowing of arteries after corrective surgery). My project, "Laser Engineering of Ti 6Al-4V Stent for Enhanced Blood Flow Kinetics," seeks to design, construct, and test a dimpled stent, along with dimple dimensions (diameter and depth), which, by application of the Magnus Effect, will substantially augment the non-sticking characteristics of platelets and accelerate the overall blood flow. I operate 400 Watts Nd-YAG machines that produce 1.06micron wavelength lasers to imprint varying parameters with independent variables. An increase in the flow of Orgasol, a blood mimic, is indicated by kinetics and thrust dynamics. I founded and became the head of this research project by requesting Professor Narendra Dahotre's guidance because, as an infant, I had my own arterial clog, due to my abnormally narrow artery. As pertains to the current project, I produced all the background research and initiated all aspects of the conducted research, acquiring, in the process a more comprehensive data set that will lead to co-authorship of a research paper.

Chloe Standridge, Department of Biological Sciences

Faculty Mentor: Dr. Lee Hughes, Department of Biological Sciences

Title: Phage Samisiti12 Transcriptome Analysis

Bacteriophages are a group of categorized viruses that infect a bacteria host. Bacteriophages display profound levels of uniqueness and express a distinct set of characteristic that sets phages apart from other organisms. Phages possess small genomes, and phages with a certain level of similarity within the genome are grouped into sub-clusters. Phages have a lytic life cycle, but under certain circumstances, phages may undergo an alternative lysogenic life cycle. A transcriptome analysis reveals portions of the genome that are expressed at different stages of the life cycle. Phage Samisti12-from sub-cluster BE1-will be placed in a culture of *Streptomyces griseus* and a sample of the phage population will be removed at various checkpoints of the infection cycle. RNA sequencing will be performed on the extracted populations to allow us to look for portions of the genome expressed at different stages of the life cycle. From this analysis, genes required early or late in the life cycle can be identified.

Lawrence Tang, Information Technology and Decision Sciences; Honors College

Faculty Mentor: Dr. Victor Prybutok, Information Technology and Decision Sciences

Title: CRS effects on Student Learning in Decision / Management Sciences

Topic: Classroom Response Systems (Clickers) effects on student learning in decision / management-science related courses. Background: Clickers were found to have a positive effect in classroom learning like increased performance, increased attendance / participation, faster feedback, anonymity, satisfaction, etc. Some negative effects include technical malfunctions, possibility of cheating, loss of clickers, cost, etc. Clickers themselves are not enough. They must be accompanied by prepared instructors / students and open awareness of clickers. Hypotheses: With clickers, student learning is greater on open-ended questions compared to those featuring multiple-choice answers. Methodology: Experimentation with a comparison between two groups (clicker questions: open ended vs multiple choice).Results: We shall have preliminary results by the poster presentation. Conclusion: We concluded that clickers are effective teaching and learning tools. We hope our findings show that there are specific teaching methods for which clickers better facilitate student learning.

Nicholas Thompson, Department of Biological Sciences; Honors College

Faculty Mentor: Dr. Lindsey Moore, Department of Technical Communication

Title: Sustainability Courses at Universities

Sustainability (Sustainable Development) has gained popularity at universities. Researchers have identified what makes some Education for Sustainability (EfS) initiatives successful at universities. Still, despite these case studies, more research is needed. Students are better prepared to face issues related to sustainability as professionals when they have a full understanding of sustainability. I recommend that universities offer an interdisciplinary course introducing concepts of sustainability to students of all majors. This course could be offered directly by the university. For example, the University of North Texas (UNT) offers various University Courses (UCRS) that are not associated with any specific department. An *Introduction to Sustainability* course could be offered as a UCRS at UNT. Sustainability may

one day become an established field through the process of institutionalization. In that case, students who are interested in sustainability will be able to specialize in sustainable practices, greatly facilitating social change for the benefit of civilization.

Diana Vargas, Haley Stroope and Michelle Lee, Department of Art Education and Art History
Faculty Mentor: Dr. Kelly Donahue-Wallace, Department of Art Education and Art History
Title: Viral Politics; An analysis of 2016 YouTube Campaign Channels and Videos

This study seeks to update the 2001 research of Anne Johnson and Lynda Lee Kaid, as published in *Image Ads and Issue Ads in U.S. Presidential Advertising*. We ask if different techniques, strategies, narratives, and symbols have been used in YouTube issue ads and image ads during the 2016 U.S. presidential campaigns. If so, we shall identify these differences. We performed a content analysis of 170 YouTube campaign ads from the 2016 presidential election. We expect that the YouTube 2016 U.S. presidential campaign ads will utilize various techniques, strategies, narratives, and symbols, which will distinguish an issue ad from an image ad.

Dorothy Walker: Interdisciplinary Arts and Design
Faculty Mentor: Dr. Kelly Donahue-Wallace, Department of Art Education and Art History
Title: Let's Tweet About It! Twitter Conversation in the 2016 Presidential Election

The purpose of this study is to update and modernize the 2008 research by Dunman and Locher as published in their article *So Let's Talk. Let's Chat. Let's Start a Dialogue*. Their article analyzed the conversation metaphors employed by the 2008 Democratic Candidates, Hillary Clinton and Barack Obama, through their YouTube campaign clips. My study features a content analysis of rhetoric used in 2016 by Democratic Candidates Hillary Clinton and Bernie Sanders. I explore their use of conversational language phrases to connect with the electorate. This study asks whether these two candidates make use of Twitter as an Exchange of Conversation through their linguistic choices in their 140 character tweets sent out during the campaign. While my research is currently underway, I expect this study to indicate that both candidates utilize Twitter as an exchange of conversation to connect with their electorate during the 2016 presidential campaign.

Kinny Xavier, Department of Biological Sciences, Honors College
Faculty Mentor: Dr. Lee Hughes, Department of Biological Sciences
Title: Lysogeny and Host Range: the Relationships between *Streptomyces* and Bacteriophages

Unraveling the mysteries of the microscopic world has led to several advancements in the fields of science and medicine. The purpose of this research is to understand the properties of two bacteriophages, Karimac and Samisti12, and the interactions they have with varied bacterial hosts. The research is divided into two parts: determining the formation of lysogens and testing host range. In the first part of the experiment, the bacteria, *Streptomyces griseus*, is placed with Karimac and Samisti12 separately to determine whether the bacteria will become lysogenic or lysed as a result of the interaction. In the second part of the research, Karimac and Samisti12 will be separately tested on five different *Streptomyces* hosts: *S. griseus*, *S. venezuelae*, *S. rhodochrous*, *S. lividans*, and *S. toxytricini*. This is to determine if the Karimac and Samisti12

phages specifically infect these bacterial species. The results and conclusions of both experiments are currently in progress.

Katrina Westermann, Charles Green and Theresa Hough, Department of Art Education and Art History

Faculty Mentor: Dr. Kelly Donahue-Wallace, Department of Art Education and Art History

Title: Bias: The Visual Framing of Candidates through Editorial Photographs

Using contemporary image galleries on newspaper websites of the current 2016 presidential campaign, our study updates the 1998 research, titled *Newspaper Photographs*, of Paul Waldman and James Devitt. We use content analysis to determine if the photographs feature liberal bias. We sample the online photograph galleries of each primary candidate from three prominent news sources: *The Washington Post*, *The New York Times*, and *USA Today* from February 8, 2016 to March 8, 2016. We anticipate finding liberal bias in newspaper photographs located in these online media.