

# 2021 UCLA NATIONAL McNAIR CONFERENCE

TUESDAY, JULY 27  
to FRIDAY, JULY 30



A forum for McNair Scholars  
to present their research,  
prepare for graduate school,  
and connect with each other

## PROGRAM

For more information, please visit:  
[mcnair.aap.ucla.edu](https://mcnair.aap.ucla.edu)

BROUGHT TO YOU BY:



**UCLA** Undergraduate Education  
Academic Advancement Program

**TRiO** Academic  
Advancement Programs  
UCF UNIVERSITY OF CENTRAL FLORIDA

**WELCOME**



**WELCOME**

## **2021 NATIONAL McNAIR SCHOLARS CONFERENCE AT UCLA**

On behalf of the UCLA McNair Research Scholars Program and UCLA Academic Advancement Program, welcome to the 2021 UCLA Virtual National McNair Conference. We are honored to be hosting over 650 McNair Scholars and staff representing 54 institutions in this virtual forum.

Scholars, you will have the opportunity to present your research, prepare to apply to graduate school, and network with graduate school recruiters, current UCLA graduate students, and fellow McNair scholars from all across the country over the next few days. Program directors and staff, we are honored by your presence and grateful you have chosen to join us. We hope that you too can connect with your colleagues at other institutions, expand your network, and exchange ideas while supporting all the scholars in attendance. To our faculty, panelists, and workshop presenters, we greatly appreciate your participation and contributions to this conference. Your presence and interest in these young scholars as they prepare for graduate school are invaluable.

This year, we are also thrilled to partner with the University of Central Florida McNair Scholars Program, to bring you a virtual Graduate School Fair with recruiters from over 60 institutions. There are a variety of graduate programs for you to explore and representatives ready to meet you. Please enjoy this virtual conference just clicks away at your fingertips.

# ABOUT McNAIR

## MCNAIR RESEARCH SCHOLARS PROGRAM

Through a grant competition, funds are awarded to institutions of higher education to prepare eligible participants for doctoral studies through involvement in research and other scholarly activities. Participants are first-generation and low-income students and students historically underrepresented in graduate school who have demonstrated interest in and academic potential for doctoral programs. Institutions work closely with participants as they complete their undergraduate requirements. Institutions encourage participants to enroll in graduate programs and then track their progress through to the successful completion of advanced degrees. The goal is to increase the attainment of Ph.D. degrees by students from historically marginalized backgrounds.

All McNair projects must provide the following activities: opportunities for research or other scholarly activities; summer internships; seminars and other educational activities designed to prepare students for doctoral study; tutoring; academic counseling; and activities designed to assist students participating in the project in securing admission to and financial assistance for enrollment in graduate programs. McNair projects may also provide the following additional activities: education or counseling services designed to improve financial and economic literacy of students; mentoring programs involving faculty members at institutions of higher education or students, or any combination of such persons; and exposure to cultural events and academic programs not usually available to historically underrepresented students.



## DR. RONALD E. MCNAIR

Dr. Ronald E. McNair was the second African American astronaut to join NASA. He was born to a family in racially segregated South Carolina and had an affinity for science and space early on in his childhood. He overcame many structural barriers to pursue his love of learning, major in Physics, and graduate magna cum laude from North Carolina A&T State University, Greensboro. Afterwards, he attended M.I.T. to attain his Ph.D. in Physics by the age of 26.

Dr. McNair was nationally recognized for his work in the field of laser physics. In addition, he received three honorary doctorates, a score of fellowships and commendations, a black belt in karate, and a reputation as an accomplished saxophonist. Dr. McNair flew his first mission as an astronaut in 1984 and was aboard the Challenger space shuttle that exploded on lift-off in January 1986. He died tragically at the age of 35.

The federal programs that carry his name seek to equip students with knowledge, courage, and an unshakable will to succeed. The program encourages first-generation, low-income, and historically underrepresented students to pursue post-baccalaureate studies specifically leading to doctoral degrees.

# WELCOME LETTER CONGRESS OF THE UNITED STATES

TED W. LIEU  
33RD DISTRICT, CALIFORNIA

COMMITTEE ON THE  
JUDICIARY

COMMITTEE ON  
FOREIGN AFFAIRS

**Congress of the United States**  
**House of Representatives**  
**Washington, DC 20515-0533**

403 CANNON HOUSE OFFICE BUILDING  
WASHINGTON, DC 20515  
(202) 225-3976

1645 CORINTH AVENUE, SUITE 101  
LOS ANGELES, CA 90025  
(310) 652-3095

1600 ROSECRANS AVENUE, 4TH FLOOR  
MANHATTAN BEACH, CA 90266  
(310) 321-7664

July 27, 2021



Dear Friends of the UCLA McNair Research Scholars Program,

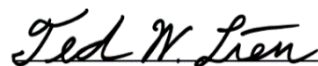
Please accept my warmest wishes and congratulations on the occasion of the 2021 Virtual National McNair Conference at University of California, Los Angeles.

Since 2003, the McNair Scholars Program has fostered innovation and academic excellence from students across an array of disciplines. The UCLA McNair Program attracts scholars who are committed to being catalysts for social change.

I would also like to congratulate the students, organizations, and alumni who are being honored throughout the conference. Your contributions are commendable, and help enhance academic excellence and social engagement at UCLA as the institution prepares future generations to better serve our nation and our global community.

Each of you play an integral role in strengthening our nation and being of service to others. Congratulations and I wish you all many more years of success as you educate our future leaders and scholars.

Sincerely,



Ted W. Lieu  
Member of Congress

# WELCOME & KEYNOTE SPEAKER

## WELCOME



### CARL S. MCNAIR

Founder,  
McNair Achievement Programs, LLC  
President Emeritus,  
Dr. Ronald E. McNair Foundation

Carl S. McNair is the Founder of McNair Achievement Programs (MAP), LLC and President Emeritus of the Dr. Ronald E. McNair Foundation. For over thirty (30) years, he has provided leadership in developing and implementing successful Science, Technology, Engineering and Math (STEM) educational programs and other related careers. The McNair Foundation was named in honor of his brother, Astronaut Ronald E. McNair, who perished along with six of his fellow astronauts aboard Space Shuttle Challenger on January 28, 1986.

Mr. McNair is the best-selling author of *In the Spirit of Ronald E. McNair -Astronaut*, an inspirational biography written to encourage, empower and inspire today's and future generations. He has appeared on CNN, ABC, NBC, CBS, PBS television networks and *The Today Show*. Mr. McNair co-wrote and created a featured animation with PBS and StoryCorps entitled, *Eyes On The Stars*. He was recently featured in the Smithsonian Channel documentary, *Black in Space: America's first African American Astronauts*.

In 1986, Mr. McNair along with family members, educators and legislators on Capitol Hill advocated for the funding of the prestigious Ronald E. McNair Post-Baccalaureate Achievement Program (McNair Scholars Program). Today, the McNair Scholars Programs resides at over 187 colleges and universities nationally including Puerto Rico.

He earned a Bachelor of Science degree in Industrial Technology from North Carolina Agricultural and Technical State University in Greensboro, North Carolina and a Master of Business Administration (MBA) from Babson College in Wellesley, Massachusetts.

## KEYNOTE SPEAKER

### ANANYA ROY, PH.D.

Professor of Urban Planning,  
Social Welfare and Geography  
Inaugural Director of the  
UCLA Luskin Institute on Inequality  
and Democracy



Ananya Roy is Professor of Urban Planning, Social Welfare and Geography and inaugural Director of the UCLA Luskin Institute on Inequality and Democracy. She holds The Meyer and Renee Luskin Chair in Inequality of California, Berkeley, where she founded and played a leadership role in several academic programs including those concerned with poverty research and poverty action.

Ananya's research and scholarship has a determined focus on poverty and inequality and lies in four domains: how the urban poor in cities from Kolkata to Chicago face and fight eviction, foreclosure, and displacement; how global financialization, working in varied realms from microfinance to real-estate speculation, creates new markets in debt and risk; how the efforts to manage and govern the problem of poverty reveal the contradictions and limits of liberal democracy; how economic prosperity and aspiration in the global South is creating new potentialities for programs of human development and social welfare.

Ananya is the recipient of several awards including the Paul Davidoff book award, which recognizes scholarship that advances social justice, for *Poverty Capital: Microfinance and the Making of Development* (Routledge, 2010); the Distinguished Teaching Award, the highest teaching recognition that the University of California, Berkeley bestows on its faculty; and the Excellence in Achievement award of the Cal Alumni Association, a lifetime achievement award which celebrates her contributions to the University of California and public sphere.

# KEYNOTE SPEAKER

## **CHANDRA L. FORD, PH.D., MPH, MLIS**

Professor, Department of Community Health Sciences

Founding Director, Center for the Study of Racism, Social Justice & Health in the UCLA Fielding School of Public Health



Dr. Chandra L. Ford is Professor of Community Health Sciences and Founding Director of the Center for the Study of Racism, Social Justice and Health in the Fielding School of Public Health at the University of California at Los Angeles (UCLA). She is lead editor (with Derek Griffith, Marino Bruce and Keon Gilbert) of *Racism: Science & Tools for the Public Health Professional* (APHA Press, 2019), which was named an Outstanding Academic Title for 2020 by the American Library Association's Choice magazine. She earned a doctorate in Health Behavior from the the UNC Gillings School of Global Public Health and completed postdoctoral fellowships in Social Medicine (at UNC School of Medicine) and Epidemiology (at Columbia University's Mailman School of Public Health), the latter as a W. K. Kellogg Foundation Kellogg Health Scholar.

Her work offers conceptual and methodological tools for studying racism as a public health problem. She originated (with Collins Airhihenbuwa) the Public Health Critical Race Praxis, which is a framework for applying Critical Race Theory empirically. Much of her empirical work examines inequities in HIV testing, care and prognoses, or documents barriers to services among LGBTQ survivors of intimate partner violence. Her work has been published in the *American Journal of Public Health*, the *Boston University Law Review*, *Ethnicity & Disease*, *Health Promotion Practice*, *Journal of Acquired Immune Deficiency Syndromes*, *Social Science & Medicine*, and other peer-reviewed journals.

Dr. Ford has received many teaching awards and several notable honors, including the 2020 Wade Hampton Frost Award from the Epidemiology Section of the American Public Health Association, a Lifetime Achievement Award from the Association of Black Women Physicians, a TrueHero Award from TruEvolution and the 2019 Paul Cornely Award from the Health Activist Dinner group.



# DEANS PANEL

## SUSAN L. ETTNER, PH.D.

Dean, UCLA Graduate Division;  
Professor, UCLA Dept. of Medicine;  
Professor, UCLA Dept. of Health Policy  
& Management



Susan Ettner is a first-generation college graduate. She obtained a dual B.A. in Mathematics/Economics and German from UC Santa Barbara in 1986, subsequently earning her Ph.D. in Economics at the Massachusetts Institute of Technology in 1991. She was on the Harvard faculty in the Department of Health Care Policy and was a recipient of Academy Health's New Investigator Award prior to joining UCLA in 1999. Dr. Ettner has over 220 peer-reviewed research publications. Her current research interests focus on mental health and substance abuse policy and services research; insurance markets; evaluation of natural experiments; and long-term care. Most recently, Dr. Ettner led a NIDA-funded evaluation of the impact of the federal Mental Health Parity and Addiction Equity Act on insurance coverage and treatment for mental health and substance abuse conditions and a related NIMH-funded methodology grant.

## ANDRÉ CHRISTIE-MIZELL, PH.D.

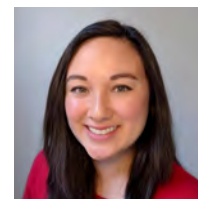
Vice Provost for Graduate Education and  
Dean of the Graduate School  
Vanderbilt University



André Christie-Mizell is a sociologist and psychologist, whose research agenda focuses on how race and gender shape physical and mental health outcomes. He is a quantitative survey researcher and is particularly interested in how family relationships (e.g., the quality of the parent-child relationship) and the neighborhood context (e.g., urban versus rural locations) contribute to well-being. He is also a licensed clinical psychologist who treats children, adolescents and young adults with mood and behavior disorders. He joined Vanderbilt's faculty in 2010, and after serving in several administration positions, he was named Vice Provost for Graduate Education and Dean of the Graduate School on January 1, 2021. He is also the Director of the Office of Postdoctoral Affairs and the Centennial Professor of Sociology.

## KRISTIN SIKORA, PH.D.

Assistant Dean and Director of Recruitment  
University of Colorado Denver,  
Anschutz Medical Campus



Kristin Sikora currently serves as the Assistant Dean and Director of Recruitment at University of Colorado Denver, Anschutz Medical Campus. With a Doctor of Philosophy (PhD) in Cellular and Molecular Biology and a background in teaching, research, and higher education, she develops and implements strategies for the recruitment of graduate students to advanced degree programs. Her cultural background of Hawaiian and Native American drives a specific focus on increasing diversity among our student body by providing pathways and educational opportunities for students from underrepresented and marginalized backgrounds.

## MODERATOR

### MICHAEL ALDARONDO-JEFFRIES

Director, Academic Advancement Programs  
Interim Director, Office of  
Undergraduate Research Division of  
Student Learning and Academic Success  
University of Central Florida



Michael Aldarondo-Jeffries has worked in higher education for over 25 years. He has spent 19 of those years in TRiO. Michael currently serves as the Director of the Academic Advancement Programs (McNair) and the interim Director of the Office of Undergraduate Research at the University of Central Florida (UCF). Prior to his time at UCF, Michael served as the Director of the McNair Scholars Program at DePaul University in Chicago. Michael has created collaborative relationships with several institutions (international and domestic) to create opportunities for underrepresented students to conduct summer research, study abroad, and explore graduate school. He has also developed several national initiatives to assist the McNair community. These include virtual graduate school fairs, McNair Promising Practices Institute (MPPI), mcnairscholars.com and the newly developed - McNair Summer Success Institute (MSSI).

# COOL PEEPS WITH PHDS PANEL

## **ADRIANA GALVÁN, PH.D.**

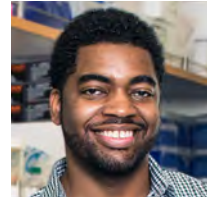
Dean, UCLA Undergraduate Education  
Professor, UCLA Dept. of Psychology



Neuroscientist Adriana Galván was appointed dean of undergraduate education effective July 2020. A member of the UCLA faculty since 2008, Galván is a professor of psychology, is co-executive director of the Center for the Developing Adolescent and is director of the Developmental Neuroscience Lab at UCLA. Her research focuses on adolescent brain development and behavior, particularly in the domains of learning, motivation, and decision-making. She is a board member and on the leadership team of the Center for the Developing Adolescent and a standing member of the NIH Child Psychopathology and Developmental Disabilities Study Section. Galván has been actively involved in the UCLA Academic Senate, having served on the executive committee, the Committee on Undergraduate Admissions and Relations with Schools, and the Undergraduate Council. Galván is a faculty affiliate of the UCLA Brain Research Institute and the UCLA Neuroscience Interdepartmental Program, an executive committee member of the UCLA Staglin Center for Cognitive Neuroscience, and co-director of the NICHD T32 Predoctoral Training Program in Adolescent Brain and Behavioral Development. She holds a bachelor's degree in neuroscience and behavior from Barnard College, Columbia University, and a Ph.D. in neuroscience from Cornell University.

## **D'JUAN FARMER, PH.D.**

Postdoctoral Fellow, Broad California  
Institute for Regenerative Medicine Center  
University of Southern California  
Assistant Professor, UCLA Dept. of Molecular  
Cell and Developmental Biology (2022)



D'Juan Farmer is a scientist in the Broad CIRM Center at the University of Southern California (USC). D'Juan is a native of the Los Angeles area and grew up in Compton, CA. He attended the University of California, Los Angeles (UCLA) and majored in Molecular, Cell, and Developmental Biology. While at UCLA, he participated in many activities and discovered his passion for scientific research. To further pursue his interests in research, after graduating from UCLA, D'Juan decided to pursue a PhD at the University of California, San Francisco. Now a scientist at USC, D'Juan researches the origins of congenital disorders impacting the skull in order to create new therapies to restore proper skull shape and growth. He has received numerous awards while at USC, including the Choi Family Postdoctoral Fellowship and the prestigious HHMI Hanna H. Gray Fellowship. He will join the UCLA Molecular Cell and Developmental Biology Department as an Assistant Professor in 2022.





# COOL PEEPS WITH PHDS PANEL

## **ALI A. VALENZUELA, PH.D.**

Associate Professor,  
Dept. of Government  
American University, Washington D.C.  
(2022)



Ali A. Valenzuela, is a lecturer in the Department of Politics and Program in American Studies at Princeton University. From 2012-2021, he was Assistant Professor of Politics at Princeton. Starting January 2022, he will be Associate Professor with tenure in the Department of Government at American University in Washington, D.C. His research and teaching are on U.S. politics, with a focus on ethno-racial and religious identities; race and racism in elections; Latina/o/x attitudes, preferences, and voter turnout; immigration, demographic change, and its political consequences; public opinion and voter behavior; and survey research design and experimental methods. His writing has been published in the American Political Science Review, Public Opinion Quarterly, Political Psychology, in other peer-reviewed journals, and as book chapters. He is currently finishing his first sole-authored book on Latino pan-ethnic unity and identity-based voting behavior in recent presidential elections.

## **MODERATOR**

## **CAROLINA SAN JUAN, PH.D.**

Director, Graduate Mentoring  
UCLA Academic Advancement Program



Carolina San Juan completed her doctoral degree in 2010 from the UCLA Department of World Arts and Culture/Dance with an emphasis on community-based arts and popular culture activism. Her relationship with AAP began in 2004 as one of the Graduate Mentoring Program's (GMP) graduate student mentors specializing the Arts and Humanities. In addition to teaching for AAP Transfer Summer Programs, Carolina taught Asian American Studies and Women's Studies for 7 years at CSU Dominguez Hills followed by 2 years' service as the Arts Education Director for East West Players, the nation's longest-running theatre of color. Today, Carolina is the Director of Graduate Mentoring where she administers a wide range of services for students interested in continuing onto post-baccalaureate and graduate school studies. Dr. San Juan continues her work as a community-based arts advocate as a board member for both Suarez Dance Theatre and Teada Productions.



# CONFERENCE HOSTS & COMMITTEE



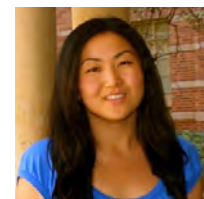
## **CHARLES J. ALEXANDER, PH.D.**

Associate Vice Provost for Student Diversity  
Director, Academic Advancement Program

A scholar and advocate of pipeline programs for the health professions, Charles J. Alexander, Ph.D., currently serves as the Associate Vice Provost for Student Diversity and Director of the Academic Advancement Program at the University of California, Los Angeles (UCLA). He provides full-time executive and intellectual leadership for a collection of programs designed for approximately 5,500 undergraduates from diverse populations, who have been historically underserved by higher education; these include students from low-income families, first-generation college students, and students from historically underrepresented. In addition to his role as Associate Vice Provost, Dr. Alexander is an Adjunct Associate Professor in the School of Dentistry's Division of Public Health and Community Dentistry. He has been a consultant, board member, and peer reviewer for federal agencies, foundations, and universities, and has written many articles on the health professions pipeline and workforce diversity in the health professions. He was recently appointed to the Technical Advisory Committee of the California Future Health Workforce Commission, co-chaired by Janet Napolitano, Past-President of the University of California, and Lloyd Dean, President and CEO of Dignity health. He has also been the recipient of many awards and honors among them are, a Presidential Citation from the American Dental Education Association (ADEA), and The California Wellness Foundation's Champion of Diversity Award. In February of 2013, the Governor of the State of California appointed him to the Medical Board of California, Physician Assistants Board and he has been serving since. Dr. Alexander earned degrees from the State University of New York (SUNY) at Cortland, University of Nebraska, and Marquette University in Milwaukee, Wisconsin.

## **ALICE HO, PH.D.**

Director, McNair Research Scholars Program  
Director, Research, Assessment  
and Evaluation  
Academic Advancement Program



Alice Ho is the Director of Research, Assessment and Evaluation in UCLA's Academic Advancement Program (AAP) and the Director of the Ronald E. McNair Research Scholars Program that supports first-generation, low-income students of color as they prepare for graduate school. She also serves as the Curriculum Coordinator of UCLA's Freshmen and Transfer Summer Programs. Alice has led several research and academic programs and now leads AAP's research and evaluation efforts. She was a postdoctoral fellow with UCLA's Center for Educational Assessment where she worked on assessments of undergraduate curriculum, programs, and grant initiatives. She has extensive institutional research, consulting, and leadership experience in higher education. Alice also serves on the McNair Association of Professionals (MAP) Executive Board as the Treasurer. She earned her Ph.D. and M.A. in Education - Human Development and Psychology and her B.A. in Psychology with an Education minor, all from UCLA. She is a proud AAP alum who is committed to equity, diversity, inclusion, and access. She is a proud AAP alum who is committed to equity, diversity, inclusion, and access.

## **CONFERENCE PLANNING COMMITTEE**

### **ALICE HO**, Chair

Director, McNair Research Scholars Program,  
Academic Advancement Program

### **ANTONIO SHALLOWHORN**

Coordinator, McNair Research Scholars Program,  
Academic Advancement Program

### **SANDRA BRUKARDT**

Coordinator, McNair Research Scholars Program,  
Academic Advancement Program

### **CHRISTIAN SPREITZER**

Director, Undergraduate Education Information Technology

### **GINGER KAN**

Programmer, Undergraduate Education Information Technology

### **ROBIN MIGDOL**

Associate Director of Communications, Undergraduate Education

### **RAY CAMBEROS**

Publications Coordinator, Undergraduate Education

### **MICHAEL ALDARONDO-JEFFRIES**

Director, UCF McNair Research Scholars Program

# DAY 1 SCHEDULE TUESDAY, JULY 27



All conference programming to take place online via Zoom.  
Please consult your email for meeting password.

TIME (PDT)	SCHEDULE
9:30 am – 10:00 am	<p><b>Welcome</b>  <b>Carl S. McNair, MBA</b>  <i>Founder, McNair Achievement Programs</i>  <i>President Emeritus, Dr. Ronald E. McNair Foundation</i></p>
10:00 am – 11:00 am	<p><b>Keynote Speaker</b>  <b>Ananya Roy, PhD</b>  <i>Professor of Urban Planning, Social Welfare and Geography</i>  <i>Director, UCLA Luskin Institute on Inequality and Democracy</i>  <i>Meyer and Renee Luskin Chair in Inequality and Democracy</i></p>
11:00 am - 3:00 pm	<p><b>Grad School Fair</b>  <i>Log into your Brazen account</i></p>
11:30 am - 12:30 pm	<p><b>Deans Panel</b>  <b>Susan L. Ettner, PhD</b>  <i>Dean of Graduate Education, UCLA</i>  <i>Professor, UCLA Dept. of Medicine</i>  <i>Professor, UCLA Dept. of Health Policy and Management</i></p> <p><b>André Christie-Mizell, PhD</b>  <i>Dean of Graduate Education, Vanderbilt University</i>  <i>Vice Provost for Graduate Education</i>  <i>Director, Office of Postdoctoral Affairs</i>  <i>Centennial Professor of Sociology</i></p> <p><b>Kristin Sikora, PhD</b>  <i>Assistant Dean and Director of Recruitment,</i>  <i>University of Colorado Denver, Anschutz Medical Campus</i></p> <p><b>Michael Aldarondo-Jeffries (Moderator)</b>  <i>Director, Academic Advancement Programs</i>  <i>Interim Director, Office of Undergraduate Research Division of</i>  <i>Student Learning and Academic Success</i>  <i>University of Central Florida</i></p>

# DAY 2 SCHEDULE WEDNESDAY, JULY 28

**UCLA** McNair  
Conference

All conference programming to take place online via Zoom.  
Please consult your email for meeting password.

TIME (PDT)	SCHEDULE
8:00 am – 9:00 am	<p><b>Cool People w/ PhDs Panel</b>  <b>Adriana Galván, PhD</b>  <i>UCLA Dean of Undergraduate Education            Professor, UCLA Dept. of Psychology</i>  <b>Ali A. Valenzuela, PhD</b>  <i>Lecturer, Princeton University Dept. of Politics and Program in American Studies            Associate Professor, American University Dept. Of Government (Jan 2022)</i>  <b>D’Juan Farmer, PhD</b>  <i>Postdoctoral Scholar, USC Broad CIRM Center            Assistan Professor, UCLA Dept. of Molecular, Cell, and Developmental Biology (July 2022)</i>  <b>Carolina San Juan, PhD (Moderator)</b>  <i>Director, Graduate Mentoring,            UCLA Academic Advancement Program</i></p>
9:00 am – 10:00 am	<p><b>BREAKOUT SESSION 1: Oral Presentations</b>  <i>Anthropology, Gender and Ethnic Studies Panel A            Atmospheric and Environmental Science Panel B            Chemistry and Biochemistry Panel C            Clinical Medicine, Dentistry and Public Health Panel D            Education Panel E            Psychology and Cognitive Science Panel F            Psychology and Cognitive Science Panel G            Sociology and Public Affairs Panel H</i></p>
10:10 am – 11:10 am	<p><b>BREAKOUT SESSION 2: Poster Presentations</b>  <i>Biology Poster Session A            Communication, Economics, and Geography Poster Session B            Engineering Poster Session C            Humanities Poster Session D            Psychology and Cognitive Science Poster Session E            Psychology and Cognitive Science Poster Session F            Sociology and Public Affairs Poster Session G</i></p>
11:10 am – 12:00 pm	Break
12:00 pm – 1:00 pm	<p><b>BREAKOUT SESSION 3: Oral Presentations</b>  <i>Anthropology, Gender and Ethnic Studies Panel A            Biology Panel B            Education Panel C            History Panel D            Neuroscience Panel E            Psychology and Cognitive Science Panel F            Psychology and Cognitive Science Panel G            Sociology and Public Affairs Panel H</i></p>
12:00 pm – 1:00 pm	<p><b>WORKSHOP: Writing a Powerful Statement of Purpose Workshop</b>            Beverly Yanuaria, M.Ed.   UCLA Graduate Division            Rhiannon Little-Surowski, Ed.D.   UCLA Graduate Division</p>
1:10 pm – 2:10 pm	<p><b>BREAKOUT SESSION 4: Oral Presentations</b>  <i>Arts and Multimedia Panel A            Biology Panel B            Chemistry and Biochemistry Panel C            Clinical Medicine, Dentistry and Public Health Panel D            Education Panel E            Psychology and Cognitive Science Panel F            Sociology and Public Affairs Panel G</i></p>
2:20 pm – 3:20 pm	<p><b>BREAKOUT SESSION 5: Oral Presentations</b>  <i>Humanities Panel A            Math, Stats, and Physics Panel B            Psychology and Cognitive Science Panel C            Psychology and Cognitive Science Panel D            Psychology and Cognitive Science Panel E            Psychology and Cognitive Science Panel F            Psychology and Cognitive Science Panel G            Sociology and Public Affairs Panel H</i></p>

# DAY 3 SCHEDULE

## THURSDAY, JULY 29

All conference programming to take place online via Zoom.  
Please consult your email for meeting password.

TIME (PDT)	SCHEDULE
8:00 am – 9:00 am	<b>BREAKOUT SESSION 6: Oral Presentations</b> Anthropology, Gender and Ethnic Studies Panel A Biology Panel B Engineering Panel C Math, Stats, and Physics Panel D Microbiology, Immunology, Molecular Genetics Panel E Psychology and Cognitive Science Panel F Psychology and Cognitive Science Panel G Sociology and Public Affairs Panel H
9:10 am – 10:10 am	<b>BREAKOUT SESSION 7: ORAL PRESENTATIONS</b> Arts and Multimedia Panel A Communication, Economics, and Geography Panel B Education Panel C Engineering Panel D Microbiology, Immunology, Molecular Genetics Panel E Psychology and Cognitive Science Panel F Psychology and Cognitive Science Panel G Sociology and Public Affairs Panel H
10:20 am – 11:20 am	<b>BREAKOUT SESSION 8: POSTER PRESENTATIONS</b> Anthropology, Gender, and Ethnic Studies Poster Session A Clinical Medicine, Dentistry and Public Health Poster Session B Education Poster Session C Humanities Poster Session D Microbiology, Immunology, Molecular Genetics Poster Session E Psychology and Cognitive Science Poster Session F Psychology and Cognitive Science Poster Session G Sociology and Public Affairs Poster Session H
11:20 am – 12:10 pm	Break
12:10 pm – 1:10 pm	<b>BREAKOUT SESSION 9: ORAL PRESENTATIONS</b> Anthropology, Gender, and Ethnic Studies Panel A Arts and Multimedia Panel B Atmospheric and Environmental Science Panel C Clinical Medicine, Dentistry and Public Health Panel D Clinical Medicine, Dentistry and Public Health Panel E Psychology and Cognitive Science Panel F Sociology and Public Affairs Panel G Sociology and Public Affairs Panel H
1:20 pm – 2:20 pm	<b>BREAKOUT SESSION 10: ORAL PRESENTATIONS</b> Chemistry and Biochemistry Panel A Communication, Economics, and Geography Panel B Education Panel C Humanities Panel D Psychology and Cognitive Science Panel E Psychology and Cognitive Science Panel F Sociology and Public Affairs Panel G Sociology and Public Affairs H
2:30 pm – 3:30 pm	<b>Networking Hour</b> Network with Current UCLA Graduate Students <b>McNair Directors and Staff Meeting</b>

# DAY 4 SCHEDULE

## FRIDAY, JULY 30

All conference programming to take place online via Zoom.  
Please consult your email for meeting password.

TIME (PDT)	SCHEDULE
8:00 am – 9:00 am	<p><b>Keynote Speaker</b>  <b>Chandra L. Ford, PhD, MPH, MLIS</b>  <i>Professor, Department of Community Health Sciences</i>  <i>Founding Director, Center for the Study of Racism, Social Justice &amp; Health, UCLA Fielding School of Public Health</i></p>
9:00 am - 10:00 am	<p><b>BREAKOUT SESSION 11: Oral Presentations</b>  <i>Atmospheric and Environmental Science Panel A</i>  <i>Biology Panel B</i>  <i>Education Panel C</i>  <i>Engineering Panel D</i>  <i>Math, Stats, and Physics Panel E</i>  <i>Psychology and Cognitive Science Panel F</i>  <i>Sociology and Public Affairs Panel G</i>  <i>Sociology and Public Affairs Panel H</i></p>
10:10 am – 11:10 am	<p><b>BREAKOUT SESSION 12: Poster Presentations</b>  <i>Anthropology, Gender, and Ethnic Studies Poster Session A</i>  <i>Atmospheric and Environmental Science Poster Session B</i>  <i>Chemistry and Biochemistry Poster Session C</i>  <i>Communication, Economics, and Geography Poster Session D</i>  <i>Microbiology, Immunology, Molecular Genetics Poster Session E</i>  <i>Neuroscience Poster Session F</i>  <i>Psychology and Cognitive Science Poster Session G</i></p>
11:10 am – 12:00 pm	<p>Break</p>
12:00 pm – 1:00 pm	<p><b>BREAKOUT SESSION 13: Oral Presentations</b>  <i>Anthropology, Gender, and Ethnic Studies Panel A</i>  <i>Arts and Multimedia Panel B</i>  <i>Chemistry and Biochemistry Panel C</i>  <i>Clinical Medicine, Dentistry and Public Health Panel D</i>  <i>Education Panel E</i>  <i>Education Panel F</i>  <i>Psychology and Cognitive Science Panel G</i>  <i>Sociology and Public Affairs Panel H</i></p>
12:00 pm – 1:00 pm	<p><b>Workshop: Financing Your Graduate Education</b>  Chérie Francis, Ed.D.   UCLA Graduate Division</p>
1:10 pm – 2:10 pm	<p><b>BREAKOUT SESSION 14: Oral Presentations</b>  <i>Anthropology, Gender, and Ethnic Studies Panel A</i>  <i>Education Panel B</i>  <i>Humanities Panel C</i>  <i>Humanities Panel D</i>  <i>Psychology and Cognitive Science Panel E</i>  <i>Psychology and Cognitive Science Panel F</i>  <i>Sociology and Public Affairs Panel G</i></p>
2:20 pm – 3:20 pm	<p><b>BREAKOUT SESSION 15: Oral Presentations</b>  <i>Education Panel A</i>  <i>Education Panel B</i>  <i>Humanities Panel C</i>  <i>Humanities Panel D</i>  <i>Psychology and Cognitive Science Panel E</i>  <i>Psychology and Cognitive Science Panel F</i>  <i>Sociology and Public Affairs Panel G</i></p>
3:20 pm – 3:30 pm	<p>Closing</p>

# GRAD FAIR & WORKSHOPS

## WRITING A POWERFUL STATEMENT OF PURPOSE

Wednesday, July 28th | 12:00 - 1:00 PM PDT



**Workshop Description:** The statement of purpose (SOP) is one of the most important aspects of your graduate school application. It tells the admission committee who you are, why you're applying, why you're a good candidate, and what you want to do in the future. Participants will learn how to write a strong statement of purpose for graduate school admission, as panelists will explain the difference between successful college essays and a statement of purpose. Panelists will demonstrate their knowledge of and fit with the faculty and departments or schools to which they are applying; their maturity and purposefulness of their pursuit of academic and professional goals; and their understanding of the relevant research, methodologies, and tools for answering research questions in their field.

## FINANCING YOUR GRADUATE EDUCATION

Friday, July 30th | 12:00 - 1:00 PM PDT



**Workshop Description:** Before you say yes to that student loan, attend this session to find out other ways to finance your graduate education. From fellowships to grants and everything in between, learn how to seek out funding opportunities to support your graduate education. This session will focus on the resources available to finance your graduate education. Special emphasis will be placed on campus-based and external fellowship support available as students advance in their graduate programs. Included in this workshop are ways in which students can effectively negotiate their financial awards and options available at the application stage of the graduate experience.

## DEMYSTIFYING THE GRE

PRE-RECORDED



This first step in crushing the GRE is hearing what those closest to the exam have to say about it. This workshop provides students with a strategic framework for GRE test preparation. The presenter will focus on an effective plan to prepare for the GRE, including how to manage test-related anxiety and promote your strongest performance, as well as how and when to use the strategies and techniques from coaching companies like Princeton Review, Kaplan, and others.



# WORKSHOP SPEAKERS

## **CHÉRIE FRANCIS, ED.D.**

Coordinator, Fellowships Services, UCLA Graduate Division

Chérie Francis currently works in the Fellowships & Financial Services unit of UCLA's Graduate Division. Dr. Francis sees her 33-year career in higher education as having offered a series of opportunities to inform others about the benefits of an undergraduate and/or graduate education and about the added value brought to that education by the existence and nurturing of a diverse body of students, faculty, and staff. Dr. Francis earned her bachelor's degree in French at Middlebury College (VT), her master's degree in Teaching English to Speakers of Other Languages (TESOL) at the University of Pennsylvania, and her doctorate in Educational Leadership at UCLA.

## **RHIANNON LITTLE-SUROWSKI, ED.D.**

Manager of Diversity and Outreach Initiatives  
Office of Diversity, Inclusion and Admissions  
UCLA Graduate Division

Rhiannon Little-Surowski is a social justice advocate and educator who has been working in higher education for over 14 years. She currently serves as the Manager of Diversity and Outreach Initiatives for the UCLA Graduate Division. In this role, she oversees diversity, inclusion, outreach and recruitment initiatives to increase representation and sense of belonging for underrepresented graduate students. Prior to joining UCLA, Rhiannon was the Program Coordinator for African Student Programs at UC Riverside, where she also received her B.A. in Political Science and M.Ed. in Higher Education Administration and Policy. Rhiannon is dedicated to creating an inclusive campus climate in higher education and eliminating barriers to access and graduation for students of color. The initiatives and programs that she has developed have led to increased graduation rates for Black students at UC Riverside. Rhiannon's passion is increasing campus diversity, dismantling barriers, and collaborating with campus partners to increase sense of belonging for underrepresented college students.

She has presented her work across the country at such conferences as the National Association for Student Personnel Administrators (NASPA). In her spare time, she served as a member of the City of Riverside Mayor's Multicultural Forum, volunteers as a camp counselor at Camp Ronald McDonald, and volunteers as a music and marching technician for the Riverside City College Marching Band. For her social justice work in the community, then-Senator

Kamala Harris presented her with the State Assembly Women of Distinction Award, awarded by Assembly member Jose Medina.

When she's not doing all that, she's working on her own education as a doctoral candidate at University of Southern California (USC) studying Educational Leadership in Higher Education, raising her two young daughters, dancing, running marathons with her husband and helping manage their family businesses. Rhiannon also loves playing the flute and performing in community theater productions. She is excited to continue her diversity work at UCLA!

## **BEVERLY V. YANUARIA**

Coordinator, Outreach and Recruitment, UCLA Graduate Division

Beverly V. Yanuaría serves as the Outreach & Recruitment Coordinator for UCLA Graduate Division, where she is responsible for coordinating diversity and inclusion programs for prospective graduate students. She is passionate about increasing representation, support, and belonging for students from populations historically underrepresented in higher education. Prior to her current role, Beverly worked in academic advising, public policy, community organizing and advocacy. She has over 13 years of outreach experience where she has worked closely with students and communities. She thrives in connecting people to the resources they need to be successful, guided by the value of "lifting as we climb."

Beverly earned her B.A. from UC Santa Cruz and M.Ed. from UCLA. She is a proud first-generation student and second-generation Filipinx-American. In her spare time, you can find Beverly cheering for all things Los Angeles (unceded territory of the Gabrielino/Tongva peoples), learning about Filipinx culinary traditions, or asking, "Can I pet your dog?"

## **JOSEPH LAMONT BROWN, PH.D.**

Associate Director of the Diversity and First-Gen Office,  
Graduate and Undergraduate Studies, Stanford University

Joseph Brown earned his Ph.D. in psychology at Stanford University, where his research examined how stereotypes shape the intellectual identities and performances of women and minorities. He has for more than fifteen years worked on graduate student diversity recruitment for Stanford's School of Humanities and Sciences. And for the last 6 years he has provided diversity & inclusion workshops in Stanford's Diversity & First-Gen Office.



# **ABSTRACTS**

ORAL & POSTER PRESENTATIONS

## July 28, 2021 - 9:00 AM PDT Breakout 1: Anthropology, Gender and Ethnic Studies Panel A

BIBIANA ORTIZ

Boise State University

*An Oral History of Transgender Idahoans: Storytelling as a Form of Remembrance and Resistance*

While there has been recent national coverage of the institutionalized transphobia in Idaho, less can be found on the individual and interpersonal realities of living in Idaho as a transgender individual and even fewer stories told by trans people themselves. As a form of oral storytelling, this research offers a space for 4 Idaho transgender, nonbinary, gender nonconforming, agender, genderqueer people to illustrate 4 stories — one of their future, one of their past, one of their present, and one of their dreams — through audio format. Grounding this research in transfeminism, standpoint epistemology, testimonio theory, podcasting, and poetic transcription, this project holds three intentions: oral history making, community engaging, and trans content creating. These 16 stories are encapsulated in a podcast called Gems, trans stories about us, by us, for us, where the oral storytelling of trans people in Idaho highlight the realities, complexities, and knowledge experienced through and within the intersections of their identities. Poetic transcriptions are then created from their interviews and given and read to them as a form of honor for their stories. This project provides a range of perspectives within the trans community in Idaho while encouraging the autonomy of trans people to share what they would like to share of their own lives and for a representation of trans people and Idaho within podcast platforms curated by a trans Idahoan individual.

ASHLEY CASAREZ

The University of Arizona

*Institutional Bullying: curriculum, campus climate, and peer victimization affecting LGBTQ+ students in Catholic school*

A growing collection of research indicates that LGBTQ+ students are more likely to be bullied, teased, and/or victims of aggressive behavior at school. Limited research has considered institutional bullying as a fundamental factor, which simultaneously affects LGBTQ+ students on campus, through curriculum, and student socialization. This becomes alarming considering Catholic schools' religious policy on LGBTQ+ topics. LGBTQ+ students attending Catholic schools express that they feel distressed about institutional silence and bullying, worry about not receiving support from individuals within the school, and fear expressing their LGBTQ+ identities while on campus. In the study, an online GLSEN survey (the Gay, Lesbian, and Straight Education Network) will be distributed to Southern Arizona's Catholic high schools that measure the comfortability and positive representation LGBTQ+ students (14-18 years old) feel in class, campus, between students, and faculty/teachers. The curriculum will be measured based on student satisfaction, giving emphasis to sexual education whether it is offered at the school or not. In addition, heat maps will be used to show where LGBTQ+ students feel most enjoyable while on campus. The anticipated findings will demonstrate the importance of educational leadership, policy, and practices in shaping positive experiences for LGBTQ+ students attending Catholic schools.

LUX BEIBHINN

University of Wisconsin, Oshkosh

*Early Intervention and Prevention: High Suicide Risk for Transgender, Non-binary, and Queer Identified High School Students*

While the growing number of LGBTQ+ individuals prevalent in modern society reflects more acceptance of queer identities in today's culture, the rates of suicide in LGBTQ+ youth have continued to rise in the past two decades. Purpose: Social support from family, peers, and schools can drastically reduce the rates of suicide, suicide ideation and suicide attempts in at-risk teens. Social rejection of LGBTQ+ teens creates an immediate demand for prevention and intervention procedures in public schools. With multiple factors contributing to the high rates of suicide in queer youth, it is important to consider the specific needs of LGBTQ+ students.

Methods: Textual analysis of research done in the last two decades with particular focus on the experiences of transgender, nonbinary, and gender nonconforming identified students. Statistics from the Youth Risk Behavior Surveillance System (YRBSS), and National Survey on LGBTQ Youth Mental Health 2021 were applied to theoretical explanations of suicide risk behavior.

Results: Disparities between previous findings on queer teens suicide and student opinion surveys point to a lack of support for LGBTQ+ youth inside and outside the public school system. To gather a better understanding of current policies, theoretical analysis of experimental findings is applied to policies and programs already implemented in schools with consideration to the multiple factors influencing the increase of suicide rates.

Conclusion: Results indicate a greater need for research in risk prevention and intervention procedures in educational institutions. Discovering gender stereotypes, supporting queer identities, and encouraging safe zones can aid in youth suicide risk reduction.

## July 28, 2021 - 9:00 AM PDT Breakout 1: Atmospheric and Environmental Science Panel B

ANA MURRIETA

The University of Arizona

[\*Biodegradation of Synthetic Surfactants\*](#)

Bioremediation is a type of biotechnology used as a means to remediate the environment of pollutants. In bioremediation, pollutants are degraded by microbes that are either found naturally or introduced to the environment. Biodegradation can be enhanced by the introduction of surfactants which reduce surface tension of the pollutant, making it easier for microbes to degrade. Natural surfactants called biosurfactants are created by bacteria which excrete the surfactant compound (Philip and Atlas, 2005). Synthetic surfactants can be produced by using biosurfactants as a model. Biosurfactants are usually known to be biodegradable, but the biodegradability of some synthetic surfactants are still unknown. In this study, synthetic surfactant biodegradability is identified by measuring the amount of carbon dioxide produced by microbes and surfactants in enclosed biometer flasks. The study was conducted in triplicate. 5 surfactants were studied along with a positive and negative control for a total of 21 flasks observed. Flasks contained microbes obtained from a wastewater treatment plant in Tucson, Arizona, along with an Environmental Protection Agency recommended nutrient medium and respective synthetic surfactants or control. All flasks had an attached sidearm filled with potassium hydroxide to capture carbon dioxide released into the flask's atmosphere. Carbon dioxide was then measured by titration of the potassium hydroxide base. The purpose of this study is to determine if the synthetic surfactants are readily biodegradable, according to the Environmental Protection Agency guidelines. Although data analysis is ongoing, we hope this study will contribute to the knowledge of how to safely remediate the environment.

THEODORE HUY TRAN

University of California, Davis

[\*Chemicals in Snow? A Nitrate Story\*](#)

Snow is an important medium in photochemistry as light can penetrate several tens of centimeters and release reaction products into the atmosphere. One chemical is nitrate which undergoes photolysis to produce atmospheric oxidants and therefore influences their concentration. However, current data on nitrate reactivity is unclear since it can be found in three areas: within the solid ice matrix, the liquid-like region (grain boundaries of the ice matrix), and at the air-ice interface. Past efforts show that photolysis of nitrate occurs faster at the air-ice interface compared to the liquid-like region and aqueous solution but studies have not observed this reaction in a relevant environment that is approximate to snow. Simply freezing water is not nature identical to real life conditions which is why we have built a snow-making machine to: incorporate principles of supersaturate water vapors, form snow crystals, and ultimately vapor deposit nitrate. The snow is then exposed to simulated polar sunlight via a filtered arc lamp and is tested for nitrate's decay rate. Other variable conditions that we have considered to test are temperature, concentration, and pH which is crucial to explore if we want to have a better understanding of nitrate reactivity. What we hope to find is the rate at which nitrate is photolyzed into atmospheric oxidants in real life conditions. Overall, a deeper understanding of nitrate photochemistry will give us a greater insight in the composition of past and current atmospheres. More importantly, this can help us characterize the severity of our climate crisis.

TAJARI BROWN-NEUSON

University of California, San Diego

[\*The UC System Tackling the Climate Crisis: How are we doing?\*](#)

The UC System has made significant contributions to the field of climate change. Its actions to reduce our campuses' greenhouse gas emissions have been much less trailblazing. Through a series of semi-structured interviews with administrators, my project seeks to understand administrators' thoughts on climate change, as well as gauge their opinions on the UC System's sustainability policies in hopes of understanding why the system hasn't done more to tackle the climate crisis. This research is also relevant to those seeking to understand why other liberal institutions across the nation have not significantly reduced their greenhouse gas emissions.

## July 28, 2021 - 9:00 AM PDT Breakout 1: Chemistry and Biochemistry Panel C

LAURELEE BOON

Knox College

*Synthesis and performance of biofuels made from various cooking oils*

Ongoing depletion of petroleum based fuel sources and environmental concerns has promoted biofuels as an alternative source of energy. Biofuels are a renewable fuel source that releases less carbon dioxide than fossil fuels when burned. Understanding how a variety of oils behave when made into biofuel is necessary for the use and application of such fuel sources. Biofuels are produced by base-catalyzed transesterification with methanol to produce methyl esters. The composition of each biofuel varies depending upon the variety of fatty acids present in the oil it was made from. Gas chromatography will be used in this study to determine the individual components of each type of fuel, which will aid in the understanding of the performance of different types of biofuels. The most studied biofuels are made from rapeseed oil and corn oil. In order to expand upon previous research, this study will focus on synthesis and performance of biofuels from a variety of oils, including palm, canola (a variety of rapeseed), soybean, coconut, sunflower, olive, peanut, hemp, and avocado. Each fuel created will be combusted, and the amount of energy released will be compared to that of fossil fuels.

VICTORIA LAMBERT

Our Lady of the Lake University

*Plant-derived Natural Products of Medicago lupulina and their Biocidal Effect on Escherichia coli and Triple Negative Breast Cancer Cells*

Plant-derived natural products were extracted from the plant species Medicago lupulina, commonly referred to as black medic, and the crude-plant extract was tested against Escherichia coli and Triple Negative Breast Cancer cells. Two different methods of extraction, steam distillation and Soxhlet extraction using methanol were utilized, and the resulting natural product composition compared using GC-MS. Preliminary results indicate that the crude-plant extract induced up to 44% inhibition of E. coli growth.

BRYAN BANUELOS JARA

University of Utah

*Biochemical insights into the conserved GGDEF domain involved in signaling molecule production*

Bacteria play many important roles in their environment; they can be found in the human gut microbiota, or as disease-causing pathogens, while other times they can be involved in bio waste remediation. Regardless, bacteria are always in constant communication with their surroundings. A specific class of enzymes in bacteria, named GGDEF for their conserved amino acid sequence, has been long known to produce the signaling molecule cyclic-di-GMP. This molecule acts as a messenger in bacteria and can effect changes in cell motility and biofilm formation upon environmental stimuli. Recent work has revealed a subclass of promiscuous GGDEFs in Geobacter sulfurreducens that can also produce the molecule 3',3'-cyclic GMP-AMP (cGAMP), which has been linked to extracellular electron transfer in Geobacter. Further, preliminary data on divergent GGDEF enzymes in Geobacter, where glutamate is replaced by an aspartate, have led us to hypothesize that these enzymes might harbor catalytic activity. To test the importance of this signature amino acid, I will design different GGDEF protein constructs based on known cGAMP- or c-di-GMP-producing GGDEF enzymes. Enzymatic activity will be analyzed via in vivo flow cytometry in the presence of an RNA biosensor that fluorescently responds to cGAMP or c-di-GMP. Altogether, this work could shed light on the functionality of conserved GGDEF domains in bacterial signaling molecule pathways.

## July 28, 2021 - 9:00 AM PDT Breakout 1: Clinical Medicine, Dentistry and Public Health Panel D

KAREN ALDANA

Boston College

[\*The Role of Race on Prenatal Care Experiences\*](#)

Racial disparities in healthcare are significantly prevalent to society as they put the lives of many mothers and their babies at increased risk for all types of health complications. It is important to note that while health disparities exist across the US healthcare system, pregnant mothers of color are particularly impacted by the lack of quality prenatal care they receive. This further impacts their own health and the health of their babies. Researchers have looked at factors that prevent mothers from receiving prenatal care, but often the blame is put on the mothers for factors like not feeling confident, fear of discrimination, decreased timeliness in initiation of prenatal care, etc. However, there is a gap in the literature that addresses how mothers of color feel about their place in the US healthcare system, particularly how the healthcare system does not allow them to receive equitable prenatal care. With this research study, we seek to gain insight on the experiences of mothers from Black and Hispanic backgrounds in regard to their prenatal care in US primary and secondary care settings, and how those experiences affected their own and their child's outcomes. The researchers will compare the experiences of Black and Hispanic with White women. We will evaluate these experiences to discover where the source of inequitable prenatal care lies in an effort to create changes within a broader system.

NIZAN HOWARD

The University of Arizona

[\*Breast Cancer Gene Testing Disparities\*](#)

Breast cancer is the most common cancer among women in the United States. Breast Cancer 1 (BRCA1) and breast cancer 2 (BRCA2) gene mutations can increase an individual's risk of breast and or ovarian cancer. Women that test positive for either BRCA 1 or BRCA 2 gene mutations have a 60 to 70 percent lifetime risk of breast cancer. However, there are a plethora of researchers who found that many racial and ethnic minorities that include: African Americans, Hispanic or Latino, Asian and Pacific Islanders, have a higher risk of breast cancer mortality and late-stage diagnosis than non-Hispanic Caucasian women in America. This study focused research on the racial and ethnic minorities in BRCA testing. Data and policy comparative analysis assessed social factors and social determinants of health in policy guideline's impact in BRCA testing disparities in America.

JACQUELINE S. FONTAINE

University of Wisconsin, Superior

[\*Barriers to Wellness in a Population of Deaf Individuals\*](#)

In order to better understand the needs of Deaf people whose primary communication is American Sign Language; this study surveyed a nationwide sample of Deaf adults. Much of the research relating to the Deaf community has been based on the responses and experiences of professionals and providers, such as those of doctors, counselors, and American Sign Language interpreters. The amount of literature and research based on the lived experiences of Deaf individuals is strikingly lacking. Upon a review of existing literature, one of the prevalent themes is that individuals within the Deaf population, which includes 10% of society, are three times as likely to experience mental illness, addiction, and domestic violence (Bones, 2016). Healthcare access and communication barriers need to be addressed directly, and not solely through the employment of professional interpreters (Phillips, 1996). Many of the responses of this recent study echo the same sentiment and hope that in the future, more direct providers will become proficient in American Sign Language, and privacy may then be maintained through person to person interaction.

## July 28, 2021 - 9:00 AM PDT Breakout 1: Education Panel E

KIARA JAMES

Kent State University

*Assessing the Youth Development Workforce – Realities, Readiness and Re-Engagement Post-2020*

Youth Development Professionals (YDP) are: (1) individuals who work for organizations that support after school (AS) and out-of-school time (OST) programs; (2) important and trusted adults in the lives of young people; and (3) engage with youth from all walks of life. Within Cuyahoga County there are approximately 534 AS/OST programs and over the past 20 years there has been a systematic investment in the training and preparation of YDP within the County. The emergence of COVID-19 and efforts to promote racial equity have significantly shifted the structure, focus, and processes associated with this YDP and AS/OST programs. Accordingly, the purpose of this study is: to explore the experiences, perceptions of competence, and readiness of YDP; and, to identify strategies to support re-engagement with youth as a part of AS/OST programming. This will involve developing and implementing a web-based assessment among YDP in Cuyahoga County which includes a series of questions related to: demographic characteristics; competencies; equity; and engagement strategies. Participants will be recruited from the Cuyahoga County Youth Work Institute (CCYWI) database. The survey will be administered in July of 2021 over a period of 3-4 weeks using the Dillman method of web-based research. Results will be shared with local YDP, AS/OST programs, and CCYWI participants in the fall of 2021 in addition to being submitted for publication in the Journal of Youth Development.

Newman, J. (Year). Supporting the Out-of-School Time Workforce in Fostering Intentional Social and Emotional Learning. Journal of Youth Development, Volume 15 (Issue 1), 239-265. doi:10.5195/jyd.2020.807

EROS PADILLA

Purdue University Northwest

*Implementing Virtual Serious Gaming in Nursing Skill Competency*

Abstract

Context/Background: Traditional pedagogy methods for skills development include using faculty demonstration and mannequins to practice skills in the lab. There are barriers to traditional pedagogies include nursing faculty, lab availability, and mannequin shortages. There are limited open lab hours for students to practice their skills with mannequins. There is a need to explore alternatives to supplement traditional pedagogy methods. A promising method to supplement skill mastery is the use of a virtual serious game for nursing skills.

Objectives: The multidisciplinary team developed a virtual serious game for fundamental skill mastery. The goal of this project is to assess the functionality of the virtual game in promoting skills mastery in the College of Nursing.

Methods/Setting/Work Done: This project evaluates the functionality of a virtual serious game to promoting nursing skill competencies. Particularly, this virtual serious game will be a supplement for students to learn how to insert a nasogastric tube. Data obtained looks at how efficient the functionality of the virtual serious game is to enhance the outcomes for student skill competencies.

Results: We currently have not collected results due to the virtual serious game still in development.

Conclusion: The virtual serious game can improve nursing students' ability to perform nasogastric tube insertion than traditional pedagogy methods. Also, it provides students with more practice time without needing to be in the skills lab. Combining virtual serious gaming and traditional pedagogy methods could enhance the retention of knowledge and motor coordination to develop the skill mastery.

WEN SHAO

Rutgers University

[\*Inq-ITS: Developing Microworlds for Virtual Simulation Learning\*](#)

Inq-ITS is a science-based inquiry program used in classrooms that allows teachers to provide their students virtual learning laboratory experiences. Inq-ITS produces its laboratories through verified Next Generation Science Standards (NGSS), giving science outcomes and expectations for students to adapt. Within Inq-ITS, students conduct experiments by manipulating multiple variables within the laboratories to understand the results on their screens. Afterward, they analyze the results and create hypotheses, claims, and reasoning based on the results, which is inquiry-based learning. This displays these students comprehending the science concepts of the virtual laboratory and practicing the scientific method that demonstrates their knowledge through inquiry. Within Inq-ITS, we have added pre and post-assessment questions that gauge the students' understanding of the laboratory before and after. These questions are designed based on the laboratory itself to display their current knowledge of the sciences. Depending on their correctness rate, this is further analyzed on whether students are comprehensive of the material or if they're lucking out on false positives. Inq-ITS is an excellent tool for students to use the scientific process to learn through inquiry, allowing inquiry-based learning to be more effective than traditional style methods.

ERROL BROWN

Rutgers University–New Brunswick

[\*The Truth of Inquiry Based Learning\*](#)

There has been a battle in the education field on how things should be taught. This research investigates the importance and strengths of inquiry-based learning. The most common type of learning currently in the United States is traditional learning. This research aims to demonstrate the importance of inquiry-based learning and highlighting the strengths and advantages over traditional learning styles. The procedures to be followed in order to prove this point will be to find quantitative data of how much a student has learned and is motivated to pursue a STEM career before and after their inquiry-based learning session from those who previously had only experienced traditional learning. With roughly around 3000 middle school students questioned and who have completed at least one virtual science lab. Our preliminary results exhibit that inquiry-based learning to be more beneficial for students based on their increase of STEM passion and increased understanding of what they learned. The potential impact of this work will demonstrate to people in the education field that inquiry-based learning is the new way of learning that should replace the traditional way of learning.



# July 28, 2021 - 9:00 AM PDT Breakout 1: Psychology and Cognitive Science Panel F

KATIERA DICKINSON

John Jay College of Criminal Justice

[\*Analyzing the link between racial socialization and academic success in Black college students: Examining race-based stress as a moderator\*](#)

Research has identified a specific form of stress experienced by minority groups. This stress, known as Race-Based Stress has shown to be linked with racial identity statuses and psychological functioning. The purpose of this study is to understand the relationship between racial socialization and academic success in Black college students, moderating for symptoms of race-based stress. Data from 150 Black college student were collected using the Comprehensive Racial Socialization Inventory, and the Race-Based Traumatic Stress Symptom Scale. A regression analysis was conducted to examine the moderating effect of race-based stress on the relationship between racial socialization and academic success. The results of this study should indicate how, depending on the presence of race-based stress, the level racial socialization that an individual receives has a significant impact on determining academic success. The findings of this study could be applied to the education system, where often Black students are encouraged to push through challenges they might face, without recognizing the harmful effects it could have on them. Limitations and implications for future research are discussed.

KAITLYN SALAZAR

Our Lady of the Lake University

[\*Comparison of Short Course and Long Course Paths on One-mile Run Time and Correlation Between Stress Levels and Performance Time\*](#)

The purpose of this study is to determine if there is a significant difference between running times in a short course compared to a long course. The second purpose of the study is to determine if high stress levels correlate with a lower performance outcome. Prior literature such as Chang, Young-Hui, and Kram (2007) found that athletes were up to 0.4 seconds slower on a track with more curves such as the short course in this research. Nippert, Smith (2008) found that psychological stressors can cause injury occurrence in athletes, which can lead to a decrease of performance in their sport. Two groups will be formed from college students and will be split evenly to perform a crossover study. A scale questionnaire will be given out prior to each run to determine stress levels among the students. The first group will run 1.25 miles on the long course, followed by a 48 hour break, they will then run the short course as the second group will progress in the opposite order. The mile times will be used in a T-test to determine which course resulted in a faster performance time. The questionnaires will be evaluated to determine if high levels of stress correlated with a slower performance time. These results can be used by coaches to determine which type of path can result in their athletes achieving peak performance, as well as allowing them to understand how stress can correlate with performance outcome.

TYSHANA CAMPBELL

Rutgers University, New Brunswick

[\*The Impact of Disasters among Latinx Students in Higher Education\*](#)

Due to the recent increase in disasters such as COVID-19, it has been established by many researchers that there is minimal research on the effects of disasters on college students (Copeland et al., 2021). However, there has not been a great number of disasters that have impacted college students. The most recent disaster, COVID-19 was very different from other disasters. It forced most institutions to continue teaching students remotely. Even though, there was no research on the implications that it would have on students, faculty, and other staff members. Thus, our work is to analyze the role that disaster capitalism plays and how does it impact Latinx undergraduate students. To work toward our findings, we will be using a phenomenological approach focused on how individuals experience or live through a specific phenomenon (Moustaskas, 1994). Phenomenology is used to reduce a person's individual experiences with a phenomenon to a description of the collective (Creswell, 2009). The goal of phenomenology is to understand how participants describe "what" and "how" they experienced a common event, feeling, and/or state of being (Moustaskas, 1994). Hence, our preliminary findings exhibit high levels of stress and depression when displaced. Also, there is minimal institutional support for students, which affects their ability to learn while remote. Furthermore, this study can contribute to an important understanding of institutions' response to disaster and how to include Latinx undergraduate students within it.

# July 28, 2021 - 9:00 AM PDT Breakout 1: Psychology and Cognitive Science Panel G

SAIGE ADDISON

Purdue University Northwest

*Intersectionality: The Impact of Race and Gender on Emotion Stereotypes*

Following Smith, LaFrance, & Dovidio's (2017) urge for researchers to consider race, gender and emotion simultaneously, in this study we examine the combined influence of gender and race on emotion stereotypes. Existing literature focuses on how emotions are perceived based on either a target person's race or their gender. However, our research uses an intersectional lens to evaluate the effects of the combined influence of race and gender. Intersectionality accounts for the impact of an individual's multiple and intersecting identities, thereby creating different experiences for those at various social locations (Crenshaw 1989). Although some people are assumed to hold more marginalized identities, there are aspects of both power and oppression for each identity held. Thus, a white woman may hold some degree of power as a white person, but may hold less power as a woman. We use a modified version of Timmers and colleagues (2003) survey to capture respondents' attitudes about emotion stereotypes. In this study (N=193) respondents rated the extent to which they agree with different beliefs regarding the emotional behaviors of (Black or white) men and women. We find that participants hold more stereotypical views about the emotions of white women and men than of black women and men. These findings add to the increasing calls to consider the intersectional impact of both race and gender on emotions.

SYDNIE ROBERSON

Purdue University Northwest

*The Impact of COVID-19 on Lifestyle Related Behaviors in a Multicultural Campus Community*

The COVID-19 pandemic has brought on many changes to what we once labeled our normal everyday lives. Wearing face masks and facing personal apprehension if we are less than six feet away from someone has now become the new "normal" for many. These precautions were put in place to keep us as a country safe from acquiring the SARS-CoV-2 virus, however there are downsides associated with these new safety measures. The aim of this study is to observe the different ways that the coronavirus pandemic has affected multicultural populations of the PNW campus community in regards to lifestyle related behaviors that directly influence physical and mental health, and overall well-being. In this study, we will take a quantitative approach using a Qualtrics survey. Our population will be students and staff of the PNW community, who will be asked a series of lifestyle related questions pertaining to before and during the COVID-19 pandemic. The survey consists of 24 primary questions about dietary practices, physical activity, screen time, sleep habits, and the use of cigarettes and alcohol. The results of the survey will be quantified and compared across the following four ethnic categories: African American, Latino/a, Caucasian, and other. We expect that minority ethnic groups will be found to have faced a higher number of adverse lifestyle health consequences than Caucasians. Our study is currently in review with the Purdue University Institutional Review Board (IRB-2021-914). We expect to be able to quickly gain participants once the study is approved by the IRB.

PAMELA ESPARZA

Wayne State University

*Binge Eating Disorder (BED): Examining the Risk Factors Among Racialized Communities*

The purpose of this research is to investigate risk factors associated with binge-eating disorder among racialized communities living in the United States such as those from Latinx, African American, and Native American backgrounds. I will do this by exploring how existing literature has examined the risk factors of binge eating disorder (BED) and similar binge-eating behaviors among racialized communities living in the United States. My research question asks: What are the primary risk factors for BED and similar binge-eating behaviors among racialized communities? The hypothesis: One of the primary risk factors for BED and similar binge-eating behaviors among racialized communities includes exposure to adverse childhood experiences (ACEs)

## July 28, 2021 - 9:00 AM PDT Breakout 1: Sociology and Public Affairs Panel H

GONZALO ROCHA-VAZQUEZ

University of California, San Diego

[\*How Prisons Contribute to the Expansion of Organized Crime in Brazil\*](#)

Organized Crime is one of the most prevalent issues in Latin America, touching every aspect of peoples' lives. Studying Organized Crime is not only difficult for scholars and journalists but also dangerous. The lack of available information requires researchers to rely on in-the-field research: confiscated documents provided through connections with state officials and departments, in-depth interviews with locals, and other related statistics. This study presents a different approach to studying crime, making use of the widely available data online. This approach to mapping criminal activity provides a much-needed way of collecting standardized results using widely available data. By examining crime at the state level, we can map the spread of gangs over the last 15 years. This study utilizes this data to test how the number of prisons in a state affects its susceptibility to criminal activity by a prison-based gang, using Brazil's Primeiro Comando da Capital (PCC) as a case study.

ESMERALDA LOPEZ

University of North Texas

[\*Factors Associated with Public Support for the Colombian Peace Agreement: An Exploration of Trust and Violence\*](#)

Colombia's 2016 peace agreement failed by a narrow margin in the public referendum but passed in the legislature, officially ending the 52-year armed conflict between the Colombian government and the Revolutionary Armed Forces of Colombia [FARC]. Despite the agreement, violence and conflict persist. Understanding the referendum's failure may suggest the means to increasing support for – and the effectiveness of – the agreement. Survey data from 2016 suggest that support for the peace agreement may be predicted based on a person's trust in the government, trust in the FARC, belief in FARC demobilization, and proximity to violence.

HECTOR ORTEGA

University of Wisconsin, Oshkosh

[\*Tibetan Buddhist Rhetoric within the Tibetan Sovereignty Debate\*](#)

This paper will look at the Tibetan Sovereignty Debate, particularly the dialogue from advocates of the People's Republic of China (PRC) and the Tibetan Autonomous Region (TAR). Through literary analysis, I will examine the religious, political, and historical elements of Tibetan Buddhist language rhetoric to build the case for a potential solution to the devastating, decades-long, modern Tibet Issue. I do this by scrutinizing books, news articles, journals, statements, speeches, online publications, and other forms of text that have come from notable actors involved in the Tibet Issue, such as the 14th Dalai Lama, the 10th Panchen Lama, Chairman Xi Jinping, and Chairman Hu Jintao. Questions about the role of Tibetan Buddhism and the use or "weaponization" of it by both parties for this geopolitical issue are brought to light. Additionally, this paper will briefly discuss the implications and repercussions of the political actions that the central Chinese government and Tibetan advocates have taken, as well as the expectations for the Tibet Issue in the future.

## July 28, 2021 - 10:10 AM PDT Breakout 2: Biology Poster Session

### A

CAMYA BRAZIL

Loyola Marymount University

*The Effect of Multiple Stressors on Mytilus Galloprovincialis*

Marine mussels (*Mytilus*) are common models for studying environmental stress on marine invertebrates and as a keystone species and filter feeder, they are essential for coastal community dynamics. However, most studies test a singular stressor while marine environments are composed of multiple stressors. Therefore, our project focused on investigating the effect of multiple stressors (hyposalinity and elevated heat) on *Mytilus galloprovincialis* clearance rate (CR), a proxy for feeding rate. We predicted that combinations of lower salinity (20 ppt) and elevated temperature (25°C) will have a lower CR compared to the control conditions (17°C, 34ppt). *M. galloprovincialis* (N = 95) were collected from Marina del Rey, CA and acclimated to control conditions without food in recirculating seawater tanks prior to experimentation. During experimentation, *M. galloprovincialis* were allowed to feed for 30 minutes in temperature and salinity treatment conditions (combinations of 17, 20 25 °C and 34, 28, 20 ppt; total of 9 treatment combinations) and CR determined. We found that regardless of salinity mussels exposed to 20 or 25°C showed a 50% decrease in CR compared to the control. For instance, at control conditions the mean CR 1.97 L/min\*g while at 20 ppt and 25°C the CR was 0.72 L/min\*g. This study mimics the potential effects of multiple stressors due to climate change and gives an idea on how a foundational species of marine ecosystem may be affected.

DALTON PIOTTER

University of Minnesota, Twin Cities

*Genomic Instability and Evolution of Candida albicans Under Selective Pressures*

Increasing antifungal resistance and limited classes of antifungal drugs pose severe threats for the treatment of fungal infections caused by *Candida* species. *Candida albicans*, the most common fungal pathogen, is a common gut and oral opportunistic pathogen of the human microbiome capable of large chromosomal rearrangements that confer drug resistance. One chromosome rearrangement includes an amplification of the left arm of chromosome 5 (Chr5) in an isochromosome structure which promotes drug resistance due to the additional copies of two genes (ERG11 and TAC1). Our experiments have identified that the centromere of Chr5 (CEN5) is flanked by inverted repeat sequences and the CEN5 sequence can become inverted during isochromosome formation. To determine if the CEN5 inversion is independent of the isochromosome structure, 30 single colonies were isolated from a strain that underwent CEN5 inversion and acquired the isochromosome. Single colonies were plated on YPAD and YPAD with 1 microgram fluconazole, and both were incubated overnight. Small and large colonies were observed on both media after 48 hours. Six colonies of each size, small and large, were isolated from drug and non-drug plates. An additional six large colonies were isolated from YPAD. Genomic DNA was extracted and quantified using nano-drop and Qubit. PCR analysis was performed on CEN5 to determine the orientation of the centromere followed by whole genome sequencing to the absence of the isochromosome and inversion of CEN5. Additional phenotypic analyses were performed, including growth curve analysis in the presence and absence of the antifungal drug.

LUCIANO E. CANTU  
University of Texas at Austin  
*Evolutionary Stability of Genetic Devices*

There are certain challenges that must be overcome in the field of synthetic biology, such as the relative instability of genetic devices when selective pressures are absent. This phenomenon simplified means that when we insert a genetic device within an organism, if the organism does not naturally produce this protein then it will remove or inhibit (make the device non-functional) due to the increased metabolic burden placed on the organism. Instability results from inherent mutations that accumulate, but also due to hotspots of long repeated sequences that can lead to an increase of mutations made by DNA polymerase. The accumulation of these mutations can in turn cause genetic devices to become nonfunctional through different mechanisms (i.e. polymerase slippage, homologous recombination). The Evolutionary Stability project has data that suggests repeat sequences as short as 8 nucleotides in length can lead to increased mutation rates for genetic devices. The project aims to examine how impactful these short repeats are, and if there is functional independence or positional independence in a Kanamycin antibiotic resistance gene. Recently, the project has completed trials and mutation rates for an eight base pair repeat (10 fold increase from background), a six base pair repeat (similar to background), and 3 variations of ten base pair repeats (100 fold increase from background). Overall, we hope to utilize this data to optimize the Evolutionary Failure Mode calculator developed by the Barrick lab, which analyzes the stability of genetic devices but cannot yet detect these small repeat sequences.

## July 28, 2021 - 10:10 AM PDT Breakout 2: Communication, Economics, and Geography Poster Session B

KRISTY CORPUS

California State Polytechnic University, Pomona

[\*What is Love? Cultural Discourse Analysis of Matchmakers' Perceptions on Love and Relationships\*](#)

Scholarship in interpersonal communication often neglects socio-cultural factors in their treatment of "love" as an emotion. The study we plan on conducting is one that will put U.S. mainstream cultural understandings of "love" in the center of our analysis. We plan on interviewing 10-15 professional matchmakers, who deal in the business of love on a daily basis. Using Cultural Discourse Analysis as our main theoretical framework, we hope to unveil cultural perceptions of love from the view of those who do it for a living. We hope that having these cultural understandings of love, dating, and relationships from an "expert's" perspective, will help us gain a better understanding of U.S. American deep-seated, potent beliefs of "love" as a cultural phenomenon.

ZYRAH SUSARREY

Loyola Marymount University

[\*The Role of Augmented Reality in virtual Los Angeles\*](#)

Augmented Reality and Virtual Reality have become a new and thrilling form of technology that can have a limitless amount of possibilities for users to explore. AR and VR technology within the last decade has been mainly viewed as a fun gadgets for users to use. Nonetheless, within the last 5 years with the initial Pokemon Go app release and rise in popularity of filters has shifted how AR/VR can co-exist together with the world. However, for AR and VR technology to become a mainstay of everyday life, it will have to be designed with human factors in mind. There is often a lack of understanding of human perception and expectations and the drawback with AR in the current state is the lack of involvement from various voices and identities from communities. Collectively, the research will explore how the accessibility of AR apps and AR function differ from three locations surrounding the Los Angeles area, specifically, Little Tokyo, Hawthorne, and Downtown Los Angeles. The research hopes to grab a sense of how future designers can make AR accessible to the masses in a way that is useful rather than harmful for communities.

GABRIEL FELIPE

Loyola Marymount University

[\*Earnings Calls: Identifying Voice Emotions and Behavioral Patterns in CEOs and CFOs\*](#)

This study scrutinized the emotional voices and behavioral patterns of CEOs and CFOs during the earnings conference calls. Our question was, can a machine learning algorithm recognize the CEO's and CFO's vocal emotions, which may insinuate hidden negative news associated with the firm? CEOs and CFOs have been known to hide scandals and frauds associated with the company or themselves. As a result, investment advisors, traders, company employees, and the public can be negatively impacted when the content of earnings calls is deceptive. Unfortunately, there is a lack of research on the topic of forecasting scandals through analysis of a CEO's or CFO's emotions during earnings conference calls. We collected the audio files from EarningsCast.com and the transcripts from SeekingAlpha.com, and cut the audio files at questions specific to the upcoming scandal. The audio clips were placed in the RAVDESS (Ryerson Audio-Visual Database of Emotional Speech and Song) and analyzed. The dataset contained 7356 files rated by 247 individuals ten times on emotional validity, intensity, and genuineness. The results showed that most CEOs and CFOs were disgusted or fearful when questioned on topics related to the future scandal. The initial results indicated the algorithm detected voice emotions commensurate with deception and deflection. The next step includes validating the results and to consider how efficiently and effectively to utilize machine learning algorithms to verify and validate the accuracy of the earnings conference calls.

ELVIA GOMEZ

Emporia State University

*Financial Literacy of College Students: Focus on First-Generation Students*

Financial literacy is a topic everyone should be aware of and educated on because finances are such a complex and important part of adult life. Lack of effective education is one of the root problems affecting the financial literacy of future and current college students. I too do not have a vast education and understanding of finances and I wish to learn more. For this reason, I am interested in diving deeply into researching this topic. Currently, there are many resources available on financial literacy. There are some recurring themes present in the studies. Some conclude that there is a direct correlation between education and comprehension of finances. Those who have more education have a better understanding of terminology and thus, make better financial decisions (Quirk). There are three aspects of financial literacy that the present study will focus on: the financial stability of the United States population, education, and hardships of first-generation college students.

## July 28, 2021 - 10:10 AM PDT Breakout 2: Engineering Poster Session C

RODOLFO ZARATE

Loyola Marymount University

[A Study of Nails as Connections in Wood-Framed Structures](#)

An investigation was done in order to study the strength of three common single-shear nailed and toenail lumber connections. Several pieces of literature were read and served as guidelines for the designing and calculations of lumber connections. The connections were configured and built and the NDS Wood Connection Calculator was used to calculate the design value and yield modes of three connections. The connections were built using Douglas fir-larch 2x4 nominal lumber, 20-gauge Simpson Strong-Tie steel side-plates, and common nails were used for testing. The first connection was made between a steel plate and a 2"x4" using a 6d common nail. The second connection was made between two 2"x4"s using a 10d common nail. Those connections were tested in shear using an Instron Press. The final connection was a toenail connection which used four 8d nails and was tested using a lateral shear force. It was found that the tested values of the connections were notably higher than that of the design value as well as the yield modes. This led to the conclusion that design calculations are conservative relative to their real-life performance.

BRANDON STOYANOVICH

Rochester Institute of Technology

[Protic Ionic Liquids and Mxene Nano-layers for Steel-Ceramic Contact](#)

Frictional losses and wear are an inevitable means in machine life. The researchers have been trying to minimize wear reductions and decrease frictional coefficients for quite some time. External lubricants have been known to increase efficiency and longevity of machinery. Ionic liquids have been proven to be successful neat lubricants or additives. In addition, 2-D materials have shown important improvements when added to base lubricants. In this tribological study the protic ionic liquid, Eet (2-hydroxyethylammonium 2-ethylhexanoate) is used as a lubricant and lubricant additive across several conditions, some of which include two different kinds of layers of Mxene (fx and mx). Nine different samples under similar conditions were tested using a ball-on-flat reciprocating tribometer. Each test used approximately 2ml of solution and ran for a 30 minute test duration under a 2 Newton loading. The use of neat Eet proved to help decrease frictional coefficients and wear. The addition of Mxene layers yielded a significant decrease in frictional coefficients across all conditions. The wear mechanisms as well as surface interactions will also be discussed.

CHRISTIAN DOUGLAS

The University of Texas at Austin

[Reinforcement Learning to Enhance Intersection Signal Timing Allocation and Equity](#)

A project sponsored by the Texas Department of Transportation (TxDOT), involves the development of a reward function and analysis components in a Python Jupyter notebook to train the module dictating the cycle length and green time allocation of a simulated intersection. Artificial Intelligence (AI) techniques are implemented in a Reinforcement Learning setting to incorporate equity and efficiency into decisions of green times for each approaching lane. Equity is determined through the Gini coefficient of wait times for all vehicles as well as for directions/routes traveled, to provide the most equitable intersection timing allocation given a simulated population of vehicles utilizing the intersection.

SOFIA ENCARNACION

University of Maryland Baltimore County

[Decomposition of Finite Unit Norm Tight Frames](#)

The main advantage of frames is its redundancy. Frames are used for signal processing, lossy image and sound compression methods, and wavelet transforms. The redundancy ensures no loss of information. A frame is a spanning set of  $N$  vectors in dimension  $C^d$  where  $N \geq d$ . A tight frame is a type of frame that is similar to an orthonormal basis, but without linear independence. This project focuses on the different combinations of discrete finite transform (DFT) matrices that form a tight frame in dimension  $d = 3$ . A DFT matrix is a matrix composed of different powers of the  $N$ th root of unity. Finite Unit Norm Tight Frames (FUNTFs) are created by taking  $d$  rows in the DFT matrix and putting them into a new matrix  $U$ . The vectors that form the FUNTF are the columns of  $U$ . Our goal is to classify which FUNTF's for  $C^3$  formed from the DFT can be decomposed into more FUNTFs.



## July 28, 2021 - 10:10 AM PDT Breakout 2: Humanities Poster Session D

SIERRA BOYD

California State Polytechnic University, Pomona

[\*The Under-representation of African American Females in High School U.S History Textbooks\*](#)

Education plays a crucial part in molding a child's perception of the world; when African American females fail to see themselves in their history courses, how does this develop their perception of how they exist in the world? Studies have proven that within the standard U.S k-12 history curriculum, Black history is deficient within its textbooks. From little content available to students, lessons on African American women's contributions to U.S history are virtually non-existent. Currently, there is little to no research on the psychological effects that underrepresentation can have on African American females within their history courses. Through student surveys and examining multiple high school U.S history textbooks used in LA county, this study will review the information provided on black female history to prove the scarcity of black female representation. The proposed research hypothesis suggests that African American females who do not learn about African American female history will suffer from underrepresentation, which will negatively affect their self-esteem. This study seeks to understand the necessity of in-depth lessons in U.S history courses on the contributions of African American women because representation matters in adolescent self-esteem.

TERESA LECHUGA-KANAPILLY

Loyola Marymount University

[\*The History of the California Justice System and its Effects on Latinx Immigrant Youth Mental Health Today: An Exploratory Study\*](#)

This exploratory study aims to identify historical methods and patterns of psychological violence in the California Juvenile Justice System and the influence that it has on immigrant detention centers today. The interdisciplinary and hybrid research conducted has identified paradigms between psychology and ethnic studies. The racial component to the analysis has shown findings consistent with the expectations and studies' objectives. In the Whittier State School for Boys which was established in the early 1900s, the creation of stereotypes and racist biases towards Latinx youth were based solely on their intelligence. This put into question just how much rehabilitation the juvenile justice system could provide minority delinquents (Chávez-García, 31). Following these results and research findings, a certain level of segregation took place in the facility. This led to there being a successful level of rehabilitation for white students while Mexican youth were imprisoned in horrid conditions. This withholding of rehabilitation for minorities has impacted the progress and level of physical and psychological support that they have received throughout the years. Reports from the U.S. government have identified abuse and inadequate conditions for unaccompanied immigrant minors (UIM) in detention centers today (Todres, 2018). The psychological consequences of the separation and mistreatment are known to have lifelong ramifications with little to no support or resources. The continuation of this exploratory study aims to identify resources that can assist professionals better understand the circumstances and treatment that Latinx immigrant youth experience in detention centers and how these affect their socialization.

JAYLIN HODGE

University of Colorado, Denver

*Intergenerational Effects of Slavery; A Mixed-Methods Study*

The legacy of slavery represents an enduring trauma for many Black American individuals. The trauma associated with being enslaved may be passed down through successive generations via family's oral histories, and these potentially traumatic family narratives may contribute to disproportionate rates of mental illness in these individuals. Experiences of discrimination may also prove traumatic for Black Americans, and this additional trauma may be compounded by poverty, poor physical health, and other maladaptive behaviors common among this population. This mixed-methods proposal seeks to gather in-depth information regarding intergenerational transmission of trauma associated with chattel slavery via cognitive interviews with Black Americans. This study will: (1) examine themes that arise when discussing family history of slavery; (2) consider how experiences of discrimination relate to discussions of slavery; and (3) test whether discussions of slavery are associated with psychological distress among Black Americans. Our hypothesis that traumatic experiences of chattel slavery may be transmitted through subsequent generations and contribute to the mental health or illness of descendants of enslaved people is supported by literature on intergenerational trauma. This project may facilitate further research on the biopsychosocial factors associated with intergenerational trauma and the resulting psychological distress common in the African American community. Through this process, we may ultimately begin to identify ways in which to help African American descendants of enslaved people optimally process their family's history of slavery in a manner that minimizes its traumatic nature and consequent psychological suffering.

RICEL LOPEZ

University of Northern Colorado

*El Dolor en La Cultura: Latinx Depression and Coping Mechanisms*

Depression is a common mental health issue among college students with a higher prevalence in Latinx students than in white student populations. Latinos are experiencing depression with a higher rate up to 22.3% compared to 11.8% of other low social-economic status (SES) non-Hispanic whites (Limon et al., 2016). This research aimed to explore what, if at all, are the coping mechanisms used by Latinx college students to help manage mental health, specifically, depression. This study focused on three domains: identity, social determinants, and stigma and its relationship to depression, to better understand depression among Latinx college students. There has been previous literature that has identified a resistance with coping mechanisms within Latinx communities and seeking help. Furthermore, this study found meaning of the rates of coping mechanisms from a qualitative perspective and has contributed to the existing literature that focuses on the population's voices/experiences. It is crucial to give these marginalized communities the voice to speak on their personal experiences and what help looks like for them instead of letting societal norms tell them how to "fix" their depression. Therefore, through this qualitative study, six students were interviewed, and results showed how they were all resistant to seeking a formal mental health services, instead seeking support through friends, family and other substances. Three other consistent themes were found within the participants who speak on their experiences of how being first generation, containing marginalized identities, and how finances played a role when seeking help for depression.

## July 28, 2021 - 10:10 AM PDT Breakout 2: Psychology and Cognitive Science Poster Session E

ANDREA JOHNSON

Boise State University

[\*Social Validity Survey of Interventions Used in Treating Trauma\*](#)

Social Validity is a way to determine the current acceptability of and satisfaction of certain types of treatments or interventions. This research is specifically looking at how mental health providers feel about the treatment types they use to intervene with trauma. The key to understanding the efficacy of interventions comes not only from a client's point of view but from the provider's point of view. There is research centered around social validity that shows that the attitude and ease of use from the person providing an intervention can have a great effect on how well that intervention works for the client. The purpose of this project is to explore which interventions and treatment modalities are viewed by the provider as most efficacious and easy to use. The data in this project is obtained using a survey, utilizing ranking questions, and open-ended questions. Although this research is in the early stages, certain hypotheses may be drawn from it. For example, it is hypothesized that when providers feel comfortable using a treatment methodology that this attitude toward the treatment could make it more successful. This will need to be followed up with more investigation into how the clients feel about efficacy. The hope is that this research will allow a small window of knowledge into intervening in trauma which in turn could become a path into learning about the efficacy of trauma treatment for children and families.

CRISTIAN MORENO-VAZQUEZ

California State Polytechnic University, Pomona

[\*Exploring attitudes towards Transgender Asian-Americans\*](#)

This presentation will describe a proposed investigation into attitudes and behaviors toward transgender Asian-Americans (TAA). In the US, the transgender community and the Asian-American community have historically faced prejudice and discrimination (Hughto et al., 2015; Ren and Feagin, 2021). Currently this persists, with an increase of hate crimes committed toward Asian-Americans as a result of COVID-19 rhetoric within the US (Dhanani and Franz, 2020; Gover et al., 2020). What a TAA may experience could be greater than what each identity individually may experience, therefore there may be a greater bias against TAAs due to this intersectionality. Transgender identities can be perceived as a threat to masculinity by some men, who may respond by being less supportive of transgender rights (Harrison and Michelson, 2019). The COVID-19 pandemic rhetoric in the US is related to an intergroup threat, which can become justifications for prejudice, discrimination, and hate-crimes against Asian-Americans. Although there have been studies examining intersectionality, none have examined the intersectionality of attitudes toward TAAs. This study will attempt to examine if there would be a greater bias against TAA than non-TAA and whether hate crimes will be perceived as justified. The proposed examination will be conducted online through Implicit Association Tests (IAT), vignettes and questionnaires. The IAT will be used to measure implicit biases and the vignettes to measure attitudes towards hate crimes against TAAs.

DAYSY BUSTAMANTE

University of Colorado, Denver

*Culturally Responsive Sexual and Reproductive Healthcare for Youth of Color*

Sexual behaviors that contribute to sexually transmitted infections (STIs) and unintended pregnancy are some of the leading causes of death and disability among youth. STIs and unintended pregnancy are disproportionately high among Black and Hispanic youth (youth of color). For example, youth of color represent 79% of HIV and 75% of gonorrhea infections among 13- to 19-year-olds. A critical barrier to improve health outcomes is the lack of cultural competence integration in pediatric medical training. As a result, patients report feeling unsatisfied with the quality, content, and developmental approach of providers with regard to comprehensive sexual and reproductive healthcare. A literature review was conducted in the University of Colorado Denver's online library, to identify US-based, peer-reviewed articles published in English between 2010 through June 2021. References of articles identified for inclusion supplemented the search. Three authors independently reviewed the abstracts and/or full text of 120 articles for the following inclusion criteria: presented culturally responsive considerations in the health care setting; focused on sexual and reproductive health care; and the study's population includes youth of color. This project explored best practices and areas of growth in culturally responsive sexual and reproductive healthcare for youth of color. Specifically, after reviewing sexual and reproductive health disparities in youth of color, research documenting the role of healthcare is considered. Research on existing culturally responsive approaches is then described. The review concludes with considerations towards gaps in culturally conscious sexual and reproductive healthcare for youth of color and future directions that may be explored.

RACHEL MILLER

University of Minnesota Duluth

*Experimental Manipulation of Sexual Nostalgia*

Sexual satisfaction contributes significantly to the quality of one's life and offers a variety of mental/physical health benefits. Consequently, researchers have conducted numerous studies examining ways to improve one's sexual satisfaction. Despite extensive literature, only one study has investigated how sexual nostalgia (defined as "the sentimental longing for or wistful reflection on past sexual memories with one's current sexual partner") impacts sexual satisfaction (Bjorback et al., 2021), whose results revealed that adults engaging in sexual nostalgia to a greater extent reported higher levels of sexual satisfaction than those nostalgizing to a lesser extent, suggesting that sexual nostalgia may serve as a useful technique for enhancing sexual satisfaction. That said, the causal link has yet to be examined. The current study adopted an experimental design to examine the causal relationship between sexual nostalgia and satisfaction. A total of 140 participants (89 men, 51 women) were randomly assigned to one of three conditions (control, sexual nostalgia, or general nostalgia) and completed a battery of questionnaires (including the New Sexual Satisfaction Scale; Štulhofer et al., 2010). Preliminary results revealed that there was not a significant effect of the nostalgia condition on self-reported sexual satisfaction ( $F[2,137] = 1.45, p = 0.24$ ), likely because of the short duration of the research design. In the future, researchers should examine the impact of sexual nostalgia using a longitudinal format by assessing satisfaction weeks or months later. Nevertheless, these findings have implications for clinicians working with couples experiencing low sexual desire and/or unmet sexual needs.

EMMA ESTRELLA

University of Minnesota, Twin Cities

*A Scoping Review of Gender-Based Public Harassment in the United States*

**Background.** Research on sexual harassment has focused on non-public locations such as the workplace or schools, which has left gender-based harassment that occurs in public spaces understudied despite its pervasiveness and harmful effects.

**Objective.** We are conducting a scoping review to synthesize the empirical literature on gender-based harassment in public places in the US (e.g., streets, stores, transportation). We are focusing on the definition, measurement, prevalence, and outcomes of gender-based harassment in public places.

**Design.** The PRISMA Extension for Scoping Reviews (Tricco et al., 2018) informed our study. Ten databases were searched to identify published and grey literature that examined gender-based public harassment.

**Preliminary Results.** The initial database searches yielded 7,367 titles and abstracts that were screened for potential relevance. Full text documents (e.g., journal articles, books, dissertations) were examined for eligibility (n = 345) if they appeared to reference gender-based harassment that occurred in physical public places, were empirical, and were conducted in the US or when these aspects were unclear. Sixty-five documents met inclusion criteria. Backward (citations in the 65 documents) and forward (who cited the 65 documents) citation tracking yielded an additional 3,234 titles and abstracts that were screened for potential relevance. An additional 362 documents met criteria for full-text review, which is in progress. This screening and review process will continue until citation tracking no longer yields unscreened literature. The final set of documents will be coded for relevant information by one coder and one verifier using a data charting form.

## July 28, 2021 - 10:10 AM PDT Breakout 2: Psychology and Cognitive Science Poster Session F

SARA GARCIA

California State Polytechnic University, Pomona

[\*Effect of Omega-3 Fatty Acid and Probiotic Supplements on Focus and Attention Span\*](#)

The ability to focus and pay attention is crucial for learning and social interactions. Omega-3 fatty acids (n-3 FA) and probiotics play a role in neurodevelopment, neurofunction, and participate in the relationship between brain and gut microbiome. Past neurodevelopmental studies have not investigated how stress or relaxation affects these relationships, attention span, or focus. Therefore, this pilot study will differ by having subjects meditate prior to measuring attention span and focus. The study's purpose is to determine if n-3 FA and/or probiotics improve attention span and focus in neurodiverse human subjects.

This study is a randomized crossover design, utilizing two 6-week treatment periods (n-3 FA and probiotics supplements) with a 6-week wash-out period. At baseline and at the end of each treatment period, subjects will complete a meditation, followed by a pre-test to measure emotional well-being and relaxation status (number of heart beats/min). Then, attention span and focus will be measured using Stroop Color and Word test. Emotional well-being will be measured again with a post-test. If results show positive effects between probiotics and/or n-3 FA and focus/attention span, nutrition supplementation may be seen as a way to help improve and support cognitive function. Investigating effects of n-3 FA and probiotics on focus and attention may further support the relationship between one's diet and cognitive function. As neurodevelopmental disorder diagnoses increase, further research is required. If evidence is found to support that n-3 FA and probiotic supplementation may improve attention and focus, it would potentially benefit those with learning disabilities.

JORDAN NAVARRO

Carleton College

[\*Effects of Preview Advertisements on Attitudes About Full-Length Advertisements\*](#)

Advertisements may elicit negative responses if they are surprising. This is generally attributed to the fact that advertisements are usually not relevant with regard to what the individuals were originally expecting to perceive, that is to say advertisements can be said to be interruptive of the desired experience. In this experiment, individuals were asked to watch a video where either (i) a full-length advertisement played only after the expected content was finished (backend condition), (ii) a full-length advertisement played before the expected content began and after the expected content was finished (bothend condition), or (iii) a shortened preview of an advertisement played before the expected content began and a full-length advertisement played after the expected content was finished (preview condition). We predicted that individuals assigned to the preview condition would have a more positive attitude about a brand or product than individuals assigned to the backend or bothend conditions. We expect to yield results which support this prediction and supply evidence for earnestly considering the placement of advertisements on online platforms due to how consumer response is affected.

AURORA SANT'ANGELO  
Loyola Marymount University  
[\*Does balance training effect visual perception?\*](#)

Aurora Sant'Angelo  
Advisor: Dr. Chela Willey

The rod and frame test (RFT), developed by Witkins (1948), is a measure of visual field dependence and independence. Participants view a rod within a frame. The frame is rotated between true vertical and 18 degrees clockwise or counterclockwise. Participants who reliably distinguish the rod's position to true vertical are considered visually field independent, while those who are more influenced by the tilt of the frame and are unable to distinguish true vertical are considered visually field dependent. Previous studies have shown that training in specific athletic activities may correlate with degree of visual field dependence. Specifically, engagement in visual centered exercises, such as dance, favor field dependence, while gymnastics, yoga, and balance centered training favor visually field independence. Preliminary survey data collected about athletic activities across multiple experiments from our lab's various investigations using the RFT showed mixed results and demonstrated the need for further studies. Our current study will investigate subjects who are proficient in athletic activities that require balance training, such as swimming, yoga, and gymnastics. Our hypothesis is that those who are proficient in athletic activities requiring balance centered training will have fewer errors on the RFT, suggesting greater visual field independence than those who are not proficient in such activities. These results may shed light onto the individual differences reported in visual field dependence. They may have implications on the types of exercises implemented in physical therapy for sufferers of vertigo, motion sickness, and other inner ear ailments.

HANNAH AGBAROJI, YERICKA ROSE  
Loyola Marymount University  
[\*Assessing Code Switching in an Online Task\*](#)

The present study assesses code-switching relative to an existing neuropsychological test of executive function within a group of neurotypical adults. Code-switching occurs when a bilingual person switches between two languages within a conversation. Bilingual individuals display advantages in cognitive flexibility and response inhibition (Bialystok et al., 2014). Code-switching is common among bilinguals and is hypothesized to utilize language inhibition and lexicon accessibility. Although code-switching relies heavily on working memory and executive function, there is no normative data that incorporates code-switching within existing neuropsychological tests (Ramezani et al., 2020). This study seeks to assess the validity of an online code-switching task that can be adapted for clinical use. The task utilizes a task-switching paradigm, similar to the Roger & Monsell method (Stoet 2010, 2017). Bilingual participants are predicted to outperform monolingual participants on the task. Preliminary analyses of data on 42 individuals suggest a small difference between the two groups, with bilinguals (n = 4) receiving slightly higher accuracy scores (M = .92, SD = .04) than monolinguals (n = 38) (M = .87, SD = .17) in the most mentally demanding condition. Similarly, bilinguals demonstrated marginally faster reaction times (M = 1310ms, SD = 215) compared to monolinguals (M = 1506ms, SD = 723) within the same condition. The findings suggest a slight advantage toward bilingualism, however, these results are preliminary due to small sample sizes. Further data collection will be conducted to understand the relationship between bilingualism, code-switching, and cognitive flexibility.

## July 28, 2021 - 10:10 AM PDT Breakout 2: Sociology and Public Affairs Poster Session G

JUDITH CHAVEZ-CARDENAS

Loyola Marymount University

*Community Engagement and COVID-19 Vaccination Perceptions in the Northeast San Fernando Valley*

As COVID-19 vaccination eligibility has opened, it's important to consider how we ensure that communities are being adequately served and protected from disease. The Northeast San Fernando Valley (NESFV) was among Los Angeles' most impacted communities by the COVID-19 pandemic. The NESFV is home to predominantly low and middle-income, communities of color, who often work essential jobs and reside in multigenerational households. These factors cause these community members to be at a higher risk for contracting and spreading the COVID-19 virus. However, as vaccination eligibility increases, there is still a significant gap in vaccination rates within these communities.

This project examines the way that perceptions of COVID-19 vaccination are shaped among community members in the NESFV. Community outreach is often presented as the best solution to share resources with communities. However, this approach is not the most effective. Instead, literature suggests that active community engagement is key to providing long term support and solutions. This ongoing research addresses a gap in the research among communities of color, vaccines, and community engagement. The findings from this project will ideally result in better support of communities of color by creating access and proposing viable action suggestions for community leaders, organizations, and policy makers.

MIRIAN MELENDEZ

Loyola Marymount University

*Juvenile Justice Reform: An Evaluation of the Effectiveness of Community-based Reentry Programs in South Los Angeles*

Youth encounter various challenges upon release from detention centers and correctional institutions, such as returning to unsafe communities, lack of parental support, and exposure to violent environments. In order to successfully reintegrate into their communities, youth rely on effective aftercare programs that support their continual development. The aim of this study was to understand the role of community based programs in providing youth with the adequate resources and services necessary for a successful transition, and to reduce the likelihood of recidivism. In order to conduct this systematic review of the literature, the researcher relied on databases such as: EBSCO, Sage Journals, and Google Scholar. Findings suggest that post-release youth may return to similar social environments experienced prior to detention, thus increasing exposure to unsafe circumstances that can increase recidivism and delinquency. Therefore, reentry programs are tasked with comprehensively understanding the social environments juveniles are returning to in order to address the social problems that can foster repeated behaviors, offenses, and trauma. A community-based approach, therefore, typically encompasses 1) social and community; 2) educational; 3) interagency collaboration; 3) family relations; 4) health and wellbeing. Assessing youth reentry programs that incorporate non correctional systems is critical to providing resources such as education, housing, parental preparation, mental health, substance abuse services, and physical health. It is essential for these reentry programs to work across agency boundaries in order to integrate with community partners and professional systems to produce a well-rounded system facilitating youth's long-term development and transition.



AJA GREGG  
Northland College  
[Barriers First-Generation College Students Face](#)

A first-generation college student is defined as a student whose parents did not complete a four-year college degree (What Does Being a First-Generation Student Mean? // First-Generation College Students // Marquette University, n.d.). The goal of this study was to hear the opinions and thoughts of first-generation college students and see how social, racial, and financial barriers affect them and their transition into college.

All interviews were recorded with a voice recorder and transcribed. After the transcription the data was analyzed by using thematic content analysis using excel spreadsheets to document and compare each interviewees answer to every interview question. Major findings in the study show first-generation students who are athletes have an easier time transitioning to college, minority first-generation students were afraid to attend a predominantly white institution away from home, and building connections with faculty does help the social, and financial barrier.

In conclusion, the participants of this study really take a dive into their lives at home, transition into college, financial support systems, social support systems and connections at college, and their lives on campus to give readers a better understanding of the barriers first-generation college students face but rarely speak about.

HANAN AHMED  
University of Minnesota, Twin Cities  
[Do We All Have the Same 24 Hours?](#)

Time, like other forms of capital, maintains a distinct scope of disparity for marginalized communities of color. This disparity appears as a lack of leverage over how and where communities of color can spend their time, resulting in an average day being dominated by work and limited in leisure and sleep. Existing literature about the cumulative time loss marginalized communities experience center various institutional barriers that siphon away their control and access to time, such as shift work, sleep deficiency, commute schedules, medical care delays, and incarceration. Though these studies acknowledge the growing disparity Black and Brown communities experience with time, they fall short on underscoring the overarching impact racism has on time accessibility, especially for Black children. This literature review aims to define the institutional restraints on time (e.g. healthcare, socioeconomic status, education, etc.) Black children experience and examine how they translate and exacerbate the inequities in health and wellbeing the Black community faces daily. By shedding light on the role racism plays in shaping the relationship Black youth have with time, the far reaching health consequences of these disparities in childhood, an incredibly vulnerable period for growth and development, can be better understood, investigated, and curtailed in adulthood.

## July 28, 2021 - 12:00 PM PDT Breakout 3: Anthropology, Gender, and Ethnic Studies Panel A

LUA POWERS

Knox College

*Inconsistencies in Diversity and Inclusion Positions in Predominantly White Colleges*

There was a time in American history when college was exclusively reserved for white people. Since colleges began allowing people of color to attend, students of color have still felt the weight of institutionalized racism in their learning environments. Following the Black Lives Matter movement of the early 2010s, there has been a growing number of colleges adding positions solely dedicated to provide "diversity and inclusion" to its student body. So far, not much research has been done providing nuances to this position that is recent to the history of college staff. This project brings: (1) a historical analysis of archived reports, newspaper articles, and written conversations on student race-related activism throughout the history of collegiate institutions in the Midwestern region of the United States; as well as (2) a series of qualitative interviews from the same colleges to examine modern-day race relations within these institutions between students and staff members. The meanings of 'diversity' and 'inclusion' can be interpreted differently, and these varied connotations can create inconsistencies between students and staff. Initial research shows there is still a divide between the students of color and administrations on the matters of racial equity. Inherent institutional values, such as order and hierarchy that are practiced by college employers, can negatively affect their dynamic with students and protests for equity. This project adds how historical events coincide with college student activism along with how newly established college diversity and positions are functioning in today's climate.

LUIS GODINEZ

University of California, Los Angeles

*The Psychological Impacts of Identity Formation Processes in Transfronterizo Students in Higher Education*

Transfronterizo/a/x students engage in a near-daily cross-border commute to attend public and private school. In this process, they develop complex multicultural-intersectional identities as they navigate geopolitical and cultural borderlands. The current study focuses on the experience of students from the Tijuana-San Diego border region. Students develop feelings of exclusion and resort to code-switching as they attempt to integrate themselves into U.S. and Mexican society. Once students move away from a transborder lifestyle and enter institutions of higher education, they are no longer forced to become a different persona when crossing the border. The current study is interested in the student's identity formation and the psychological impacts of this process. Using mixed-methods and several frameworks such as The Social-Ecological Model, Borderland Theories, and Legal Consciousness Perspective, I ask: What are the psychological impacts of identity formation processes in first-generation, queer, male, transfronterizo students of color in higher education? How do the psychological impacts and issues related to identity affect these students in academic spaces? I will gather data using 10-15 semi-structured one-on-one interviews and participant responses to the Everyday Discrimination Scale (EDS) and the Depression Anxiety Stress Scale (DAS). The study hopes to minimize the perpetuation of marginalization of the students in institutions of higher education by acknowledging and understanding the complex multicultural-intersectional identities of this community. Failure to do so may increase psychological ramifications that force these students to navigate academic spaces in harsh conditions.

ZAINAB BABALOLA

University of Texas at Austin

*Understanding Academic Adversity: How Adverse Familial Issues Affect Racial Minority Student Achievement*

This study aims to find a link between the academic achievement of racial-ethnic minority, first-gen, and low-income students and adverse familial experiences. More specifically, it seeks to discover if adverse familial issues compound with racial minority status to significantly impact academic achievement. It measures academic achievement through the University of Texas at Austin's GPA (grade point average) scale. The learning environment at UT Austin, a 4-year institution, will be incorporated to determine any relation to academic achievement. The study uses the students' race, along with their levels of economic, social, and cultural capital, and reports of issues at home to determine the extent of adversity they face. Samples are taken from about 10 students who are currently enrolled at the University. Data is collected through surveys and interviews followed by an analysis with the best method for this purpose, topic, and interview material collected. Ideally, categories of interviewees will be compared against each other to conclude on a result that is verifiable.

## July 28, 2021 - 12:00 PM PDT Breakout 3: Biology Panel B

BROOK LYN MERCADO

Kent State University

[\*How Caffeine Affects Vagal Tone and Arterial Stiffness with Resistance Exercise\*](#)

In order to begin the research process, one must first gather previous findings, and gain knowledge on what has already been completed. The topic at hand is the effects of caffeine on autonomic modulation and vagal tone activity during, or after resistance exercise is completed. The importance of these studies is to see if caffeine enhances performance and reduces fatigue after and during resistance exercise. A common way to organize your sources is by using a reference management software. In this case, Zotero is used. 20 articles were found that explore how different caffeinated drinks and pills can affect different groups of people. After reviewing the articles, they were organized into categories. Those categories were articles that focussed on: women and men vs arterial stiffness and vagal tone, A literature table was then created in order to organize the more important information from each article, This included the title, date and authors, subjects, methods, results, and conclusions. Each article was critically evaluated using specific criteria.

FAYE NGUYEN

University of California, Santa Barbara

[\*The Genomic Impact of the WDR5 Retrogene\*](#)

WD repeat-containing protein 5 is a highly conserved protein encoded by the WDR5 gene. It has been linked to and is responsible for a variety of cellular processes including, cell cycle progression, signal transduction, apoptosis, and gene regulation. There has been much research as to WDR5's function in a cell, particularly one that establishes that WDR5 is involved in the process of a lethal nucleolar stress response in sensitive cell lines. Because of its involvement in this process, WDR5 inhibition holds potential as an anti-cancer strategy. The mammalian genome encodes a WDR5 retrogene yet there have not been any studies on this specific gene. The purpose of this study is to determine the effect whether this retrogene affects WDR5 function, specifically if it inhibits WDR5 expression. This study may reveal a novel cellular mechanism for regulating WDR5 and has potential therapeutic applications.

LEXY DOOLITTLE

University of Wisconsin, Superior

[\*Exam anxiety and its effects on college students perceived and physiological stress.\*](#)

College students' lives have always been known to be stressful, due to exams, affecting them even after they finish their academic journey. This research studied University of Wisconsin-Superior students' physiological and perceived stress. The goal of this research was to look at if college students can accurately perceive their stress by comparing it to their physiological stress, how exams affect students' perceived stress, and how exams affect students' physiological stress. Participants were asked to complete surveys to quantify their perceived stress levels and an electrocardiogram to determine their physiological stress 3 days pre-exam, the day of an exam, and 3 days post-exam. The data was then analyzed and subdivided into gender and age groups to look for trends among participants. Results indicated that participants have higher levels of physiological and perceived stress on the day of the exam compared to either baseline or post-exam stress levels. Furthermore, female participants more accurately perceived their physiological stress than male participants. While participants identified many factors that influenced their stress levels on all three testing days, course exams clearly contributed to the perceived and physiological stress that they were feeling as indicated by the significant changes seen between exam and post-exam testing days.

## July 28, 2021 - 12:00 PM PDT Breakout 3: Education Panel C

KARIN HARTMAIER

Eastern Michigan University

[\*Explaining Monolingual America: Immigration Trends, Foreign Language Education Policy, and Society's Attitudes and Perspectives\*](#)

Foreign language education policy has been a topic of concern in the USA dating back to the time of the founding fathers. Throughout history, these policies have largely been influenced by immigration trends and society's perspectives on immigrants. A paradox of American society is that it is a nation made from a "melting pot" of immigrants while the pressure on those to assimilate has resulted in a dominantly monolingual population. With changes in immigration rates and shifts in the national origins of immigrants throughout the ages, the attitudes and perspectives of the general public toward foreigners and foreign languages have also adjusted over time. This presentation will show how policy and public opinion have been tied over the past century by mapping how foreign languages have been taught and viewed in the USA, from the early waves of immigration to the present day.

ANDREA HERCULES

University of California, Santa Barbara

[\*Policy, Pedagogy, and Critical Ethnic and Feminist Studies: Voices in Higher Education\*](#)

This research examines the history of the relationship between education and prejudices through the role of education in national policies on immigration, "get tough" legislation, sex education debates, and bilingual education. Most recently, social discomfort has stemmed from whether or not Critical Race Theory is being taught in our schools. Proponents of the ban on Critical Race Theory propagate white supremacy to meet a nationalist agenda that pushes out students of color by perpetuating tension and anxiety but do not focus on student's perspectives of ethnic studies courses. In this study, I explore the survey data of 1,153 undergraduate student's responses to their introductory ethnic studies (Asian American Studies, Black Studies, Chicana Studies, and Feminist Studies) courses at UCSB in order to gain an understanding of the importance of these disciplines in high school. In my analysis, I will offer an intersectional framework that considers the relationality between social constructions and inequalities. This work is significant for teachers, policymakers, and students of color whose curriculum is rarely representative of their identities.

ALONDRA MIRANDA

Westminster College

[\*Insights from English Language Development Teachers on Supporting Multilingual Learners in Secondary Schools\*](#)

This study explores the perspectives of secondary public school teachers whose primary responsibility is supporting Multilingual Learners (MLs). Approximately 10 percent of all students in the United States are MLs or English Learners (ELs). Despite the need for research there is a gap around the literature focusing on the experiences and issues teachers face when teaching MLs in a secondary school environment. Research that is available points to inequitable policies and practices that result in lower graduation rates and achievement gaps for secondary MLs. To better understand this phenomena, the researchers used qualitative methods to explore the perspectives of English Language Development (ELD) teachers within secondary schools based on research of effective practice and policy. Data were collected through in-depth, semi-structured interviews with secondary teachers in a metropolitan area of the western United States. By analyzing the data with the constant comparison method, the following findings arose; 1) content teachers often do not have the background knowledge and/or take the time to learn teaching strategies that support MLs; 2) tension arises when planning programs with courses specifically designed for MLs for fear of separating MLs from mainstream classrooms; 3) requiring standardized testing as the sole instrument for MLs program placement can result in long-term ELD placement and a lack of support. Based on the data collected, the authors suggest specific policies and administrative support for teachers of MLs.

## July 28, 2021 - 12:00 PM PDT Breakout 3: History Panel D

ALEXA JAIMES

St. Edward's University

*Student Movements in Argentina and Chile through Student Blogs and Ephemera, 2010-2013*

Between 2010 and 2013, secondary and university students in Chile and Argentina left their classrooms and took to the streets to protest their governments' education policies. Scholars have tied these actions to a larger rejection of neoliberalism and social inequalities by much of these nations' populations. Yet, the words, thoughts, and ideas of the protestors too often are overshadowed by the scholars' own theories. This essay seeks to correct that by examining blogs, posters, pamphlets, and other ephemeral forms of communication student protesters used to mobilize their peers, organize their efforts, convey their grievances and demands, and connect with the general public. In addition, this essay analyzes the role these modes of communication had in cross-border cooperation between student groups. By studying these sources, this research attempts to view these student movements through the eyes of student protestors.

DIAMOND MCALLISTER

St. Lawrence University

*Black Student Social Justice Activism at St. Lawrence University*

This paper aims to explore the history of black student activism at St. Lawrence University starting in 1968 leading up to the activism that the Black Laurentian Initiative is doing today. Recent black student social justice activism was indirectly born from the activism that students did in the 1960s and 70s. I will be exploring what methods of activism seemed to be effective, and which seemed to be ineffective. They wrote manifestos, letters to the university, had meetings with faculty and the president of the university, worked with the student government, and wrote student news articles to document and work through their requests.

AJAH WHITEHEAD

University of California, Santa Barbara

*The Path to Liberation: Pan-Africanism, Socialism, and the West African Anti-colonial movement*

The former French colonies on the African continent, referred to as the Franc Zone, have continuously struggled to overcome the lasting effects of the colonial era, failing to build lasting political structures and transnational unity. Economists have recently argued that Sub-Saharan Africa may be on the brink of an economic upturn, assuming governmental structures are equipped to sustain such a boom. The goal of this research project is to analyze trends across ideologies and leadership that benefited the anticolonial revolutions in West Africa during the mid 20th century in order to better understand how to foster and build transnational solidarity within the region. More specifically, I examine what influence Black Marxism and early Pan Africanism had on the ability to successfully decolonize modern West Africa. I will focus on the countries of Burkina Faso, Senegal, and Côte d'Ivoire to better understand these trends across Francophone West African countries in particular.

This study incorporates a Mixed Methods Research approach and data collection of secondary sources. These sources include texts, images, documentaries, interviews and speeches from relevant leaders and spokespersons that demonstrate cultural influence on any of the four listed countries [as well as other Francophone countries in the region].

The findings in this study suggest that the popularization of women's liberation, democratic socialism, and pan Africanism is central to successful national cohesion and progress. Central leadership that is able to promote endogenous and self-propelled progress fostered the most visible unity within national borders, as well as across the entire African diaspora.

DAUD MUMIN

Westminster College

*The State of Our Movement of Black Liberation*

On June 28, 1964 Malcolm X addressed the crowd at the Organization of Afro-American Unity rally in New York City, and proclaimed that freedom, justice, and liberation must be achieved “by any means necessary.” The United States and its founding on colonialism, slavery, and White Supremacy entrenched Black Americans in a society that was unjust and violent at their expense. Since the first ship of slaves landed in Colonial Virginia in 1619, Black Americans have fought for their freedom (Tyson, 1998). Fast forward four hundred some years, that fight has continued through today. However, we are at a critical juncture. With rampant police killings, increasing incidents of Anti-Blackness, and overall threat to the Black way of life, we must examine where our movement has been, where it is at today, and what is coming next. This study aims to begin exploring three things: First, where has this movement been? This will be explored by asking organizers about their relationship/history to their mentors, predecessors, and ancestors. Second, where is the movement for Black Liberation today in terms of ideology, strategy, and strength? Third, what is the future vision of our movement and how are willing to get there? Subsequently, I will then use interviews and examine them utilizing critical race and decolonial theory to understand and draw conclusions. To be Black is to be a living, breathing threat to the legitimacy of the United States of America, but to be Black is, also, to fight for the liberation of our people.

## July 28, 2021 - 12:00 PM PDT Breakout 3: Neuroscience Panel E

MELISSA LOPEZ

St. Edward's University

[\*Investigating the role of UNC-33 in aging and how it affects locomotion in C. elegans\*](#)

Aging is characterized by the decline and deterioration of cells and organs due to the accumulation of macromolecular and organelle damage. There is an increase in intralysosomal concentration of free radicals, age pigment lipofuscin, and a deficiency of lysosomal protein degradation as aging progress. The ortholog of gene collapsin response mediator protein -2(CRMP-2) in *C. elegans* is UNC-33. UNC-33 acts as an important modulator of neurite outgrowth and axonal guidance, membrane protein trafficking, and neuronal excitability. There are three isoforms of the UNC-33: small, medium, and large. However, only UNC-33L(large) acts to promote trafficking of axonal proteins. In this study, we hypothesize that nematodes lacking all three isoforms will exhibit premature death, reduced locomotion, and defective pharyngeal pumping. Additionally, we hypothesize that the expression of the isoform UNC-33L will be sufficient to rescue the shorter lifespan, defective pharyngeal pumping, and reduced locomotion found in *unc-33(mn407)* mutants. To analyze the role of UNC-33 in aging, we used *unc-33(mn407)*, *unc-33(mn407)* with the *unc-33L* transgene, and N2 strains. To test the hypotheses, the lifespan of 20 synchronized young adults per strain was assessed by looking at survival every 24 hours until death. To test age-related markers, liquid locomotion and pharyngeal pumping of each strain were assessed in four-day increments, for a total of 12 days. Based on our predictions, we expect to see decreased lifespan, locomotion, and pharyngeal pumping in *unc-33(mn407)*. Additionally, we predict a rescue of these three different phenotypes when the isoform UNC-33L is present.

ANGELA VELAZQUEZ

The University of Arizona

[\*Differential Alpha-2 Adrenergic Receptor Expression Across Sex and APOE Mutation\*](#)

Pre-synaptic alpha-2 adrenergic receptors, commonly recognized for their role in catecholamine induced vasoconstriction, may also contribute to the progression of neurodegeneration. Hyperactive In the central nervous system, these receptors regulate changes in the interstitial space through mediating norepinephrine levels. When the interstitial space is reduced, metabolic waste clearance such as Amyloid-beta is not as efficient. Additionally, alpha-2 adrenergic receptors are found in the hypothalamus, locus coeruleus (LC), pancreas, kidney, and adipose tissue, requiring a holistic view to accurately identify the mechanistic role of alpha-2 adrenergic receptor activity in AD. In humans, the number and activity level of alpha-2 adrenergic receptors has been suggested to play a role in arousal and alertness. We are interested in investigating whether Apolipoprotein (APOE) isoforms reflect behavioral and physiological differences in mice animal models. The aims of this study are to image hypothalamic, LC, adipose, and livers from homozygous APOE-epsilon3 and APOE-epsilon4 male and female mice to determine if the amount of alpha-2 adrenergic receptors in the tissues correlate to behavioral and physiological effects such as adipose index, cognitive measures, or weight trajectories. These results will establish the foundation for more accurate and translatable testing of AD treatments in the future.



ALEXANDER ESQUEDA

The University of Arizona

*Evaluation of Contributions of Opioid Receptors to the treatment of Levodopa-induced dyskinesia by Sub-anesthetic Ketamine*

Parkinson's Disease (PD) is the second most common neurodegenerative disease, affecting roughly 5 million people worldwide. Levodopa (L-DOPA) is the gold-standard treatment for PD patients, but after about 5-7 years of usage many patients develop a serious side effect known as levodopa-induced dyskinesia (LID). With onset, patients experience choreiform and dystonic movements, drastically reducing quality of life. We are working on repurposing sub-anesthetic ketamine to treat LID and have shown great efficacy in the rodent PD models to both reduce established LID and attenuate the development of LID, work that is currently progressing to a Phase II clinical trial. How ketamine works in addition to the well-known N-Methyl-D-aspartate (NMDA) receptor antagonism, is still unclear due to its multi-functional nature. Thus, this summer we are using the pan-opioid receptor antagonist naloxone to determine if opioid receptor activation by ketamine contributes to the lessening of abnormal involuntary movements (AIMs) associated with LID. Lesioning unilaterally with 6-hydroxydopamine (6-OHDA) to establish PD in rodents, we can test for lesion efficacy by administering amphetamine and have included rats with  $\geq 4$  net ipsilateral amphetamine-induced rotation scores into the study (mean  $\pm$  SEM:  $6.44 \pm 0.49$ ). The baseline dyskinesia being used to group animals:  $35.9 \pm 1.78$  mean AIMs  $\pm$  SEM. Three 10-hr treatment groups (all i.p. injections) – vehicle, naloxone, or naloxone (3 mg/kg) + ketamine (20 mg/kg) – with  $n=7$  each were dosed with L-DOPA (6 mg/kg) according to our established model of LID, and AIMs were scored. Pilot analysis to be presented at the conclusion of summer.

KARRAR ALJANAHI

University at Buffalo

*Studying the role of autophagy in Krabbe disease*

Krabbe disease (KD) is a lysosomal storage disorder that causes extensive demyelination in the central and peripheral nervous systems. KD is caused by a loss-of-function mutation in lysosomal hydrolase, galactosylceramidase (GALC), which is responsible for breaking down galactosylceramide (GalCer) into galactose and ceramide. Lack of the GALC results in the accumulation of GalCer and its toxic byproduct, psychosine. However, accumulation of these two substrates is not sufficient to explain the severity of the disease. We are using well-characterized Schwann cells (SCs) in a specific GALC-ablated conditional mouse model, that presents with pathologies of KD in the peripheral nervous system. This allow us to study what cellular mechanisms are altered by the lack of GALC function that further contributes to disease pathogenesis and severity. Based on recent results from electron microscopy, western blotting, and immunohistochemistry, we detected changes in autophagy components in the SCs of pre-symptomatic mutant mice. We hypothesized that autophagy is affected by the lack of GALC and it contributes to disease pathogenesis. To test this, we deleted Atg7 from our KD mouse model and are currently characterizing myelin abnormalities and disease severity by semithin quantification and western blots.

## July 28, 2021 - 12:00 PM PDT Breakout 3: Psychology and Cognitive Science Panel F

KELLY DUONG

California State University, Long Beach

[\*Oppositional Defiant Disorder & Racial Bias: a study using reverse correlation methods\*](#)

Oppositional Defiant Disorder (ODD) is a recurrent pattern of negativistic, defiant, disobedient, and hostile behavior toward authority figures that persists for at least 6 months. Prior research has shown that racial disparities are evident in ODD diagnoses of African American children (Feisthamel & Schwartz, 2009; Schwartz & Feisthamel, 2009). Our study seeks to examine cognitive representations of individuals with ODD to determine if these representations reveal racial biases. We employed reverse correlation methods to reveal participants' (n = 76) cognitive representations of individuals with ODD. A different set of participants (n = 79) judged the classification images developed from the reverse correlation paradigm in terms of perceived racial typicality, perceived diagnosis of ODD, and gender. Results revealed significant differences such that the classification image for an individual diagnosed with ODD was more likely to be categorized as Black/Latinx compared to the unselected composite image, however no significant differences emerged for perceived gender (both images viewed as a boy) and marginally significant differences in perceived ODD diagnosis. Our study demonstrates that cognitive representations of the category ODD reflect racial biases with implications for racial disparities in clinical diagnosis and hopefully bias reduction.

GIOVANNI MARQUEZ

The University of Arizona

[\*Social Vigilance & Depressive Symptomology: An Unexplored Behavioral Pathway\*](#)

Background: Social Vigilance is a psychosocial stress behavior that is characterized by the monitoring of one's social environment for potential threats. There is a paucity of stress research investigating social vigilance as a potential behavioral pathway for psychological health outcomes. Individuals of racial-ethnic minority status may experience unique psychosocial stressors compared to their non-Hispanic white counterparts; due to this variance in stress burden race-ethnicity and acculturation may serve as moderators. Aims: The aim of the current study is to ascertain whether social vigilance is associated with depressive symptoms and whether this association is moderated by race-ethnicity and acculturation status. The hypotheses were twofold: 1. social vigilance is positively associated with depressive symptoms, and 2. this relationship is significantly greater in racial-ethnic minority groups compared with their non- Hispanic white counterparts. Methods: A multi-site, cross sectional study consisting of N = 3,283 diverse young adults was used as the secondary data source. Results: Preliminary results revealed a significant, positive association between social vigilance and depressive symptoms,  $b = 0.21$ ,  $se = 0.14$ , 95% CI (0.18, 0.23),  $p < 0.001$ . A significant interactive effect between social vigilance and race-ethnicity on depressive symptoms was found,  $F(5, 2881) = 4.15$ ,  $p = 0.001$ . Conclusion: Preliminary analyses revealed support for the first hypothesis as well as supporting evidence that the association between social vigilance and depressive symptoms varies significantly across racial-ethnic groups. Future analyses will deconstruct interaction effects to test the second hypothesis and assess acculturation as a moderator of this association in Latinos.

KHALID YUSUF

University of Nebraska–Lincoln

*Biopsychosocial Health: Examining the Relationships Between Loneliness, Social Connection, and College Students' Health*

There has been a surge of interest in the connections between physical health, mental health, and social experiences such as interpersonal relationships, and loneliness. Current literature examining social participation and quality of life showed that social connection is important for psychological, emotional, and physical wellbeing. Loneliness is associated with mental health symptoms including depression, anxiety, and psychosis. Research links loneliness with increased mortality likely related to its correlation with health risk factors such as obesity, smoking, and physical inactivity. Longitudinal studies have found loneliness to be a predictor of future development of coronary heart disease, stroke, fatigue, and pain. Considering the increased prevalence of loneliness over the past few years, research examining the relationships between dimensions of social experience including loneliness, social connection, social support, and participation are crucial to help improve interventions aimed at increasing persons health and wellness. The current study examines relationships between college students' physical health, mental health, and social experiences. Cross-sectional data examining physical and mental health, loneliness, social connection, social support, and social participation was collected from 74 college students via online self-report surveys. Based on prior research, we expect to find a positive association between physical health, mental health, social connection, perceived social support, and social participation. We also expect there will be a negative association between physical health, mental health, and loneliness.

## July 28, 2021 - 12:00 PM PDT Breakout 3: Psychology and Cognitive Science Panel G

BRIANA FRANCO

California State University, Long Beach

*Don't leave me alone!: Social pain and social distress mediate the relationship between social exclusion and aggression*

Social exclusion (when an individual is ostracized or ignored by others) augments aggression. Previous research also links social exclusion with increases in social pain and social distress. The current study is the first to explore whether the impact of social exclusion on aggression is mediated by social pain and social distress. Participants engaged with fictitious players in a virtual ball-tossing task (viz. Cyberball) designed to end with participants either being included or excluded. Participants then completed measures of social pain and social distress. Finally, they aggressed against one of the other Cyberball participants by delivering a painful noise blast (viz. aggression measure). A serial mediation analysis indicated that social pain and social distress significantly mediated the relationship between social exclusion and aggression. Specifically, exclusion (compared to inclusion) was associated with more social pain which in turn augmented social distress and subsequent aggression. Reversing the mediators made the effect non-significant. Implications of these findings on violent behavior will be discussed.

SHAMECIA PULLEM

Knox College

*How Do College Students Perceive and Engage with Creative Peers? The Impact of Sociometric Creativity on Social Willingness*

Although creativity is a valued characteristic, it is generally defined through performance on specific tasks like problem-solving. However, there are other ways to define creativity, such as sociometric creativity, in which an individual is defined as creative by their peers. Sociometric creativity is closely associated with giftedness such that individuals are often identified as "gifted" by those around them. There are many factors that influence sociometric creativity, but this study considers traits and stereotypes that are commonly associated with creativity, such as independence or intensive reading. In previous literature, such as Hopp et al. (2019), sociometric creativity has influenced social engagement, especially in gifted populations such that peers perceived as creative experienced more positive social interaction (friendship) than negative interactions (dislike). However, these results were only collected from a sample of adolescents. The present study investigated whether results were similar for college students. Specifically, we hypothesized a positive relationship between sociometric creativity and the willingness to socially engage, where willingness to socially engage is to increase as individuals are perceived as creative. For this, we composed five vignettes describing five individuals. Two Likert scale items were then composed for assumed creativity and likeliness to interact with the described individuals. To measure giftedness, the Gifted Program Selection and Personality Questionnaire (Kim et al., 2009) was modified and included in a survey given to participants. This research intends to clarify how creative and gifted individuals are socially received so as a society, adjustments can be made that advance more positive social interactions.

GODWILL OKE

University of Wisconsin, Madison

*College Adjustment of Black, Indigenous, Students of Color*

Adjusting to college life can present academic, psychological, and interpersonal stressors that adversely affect students. This period may be particularly stressful for Black, Indigenous, and People of Color (BIPOC), but BIPOC students' experiences are understudied. We will recruit a group of 100 incoming UW-Madison freshmen; 50 of whom will be BIPOC and 50 of whom will be white. Before arriving on campus in the summer before freshman year, we will administer an online survey to assess stress and well-being. One month into the semester, we will assess engagement in extracurricular activities, use of campus resources, and their sense of belonging. At the end of the Fall semester, we will re-assess all baseline and one-month measures. We will also acquire end-of-year academic transcripts. Through random sampling of the BIPOC group, we will conduct three focus groups at post-testing; these focus groups will serve to contextualize quantitative data on college adjustment. This study will provide insight into how the college experience affects college freshmen in general, and BIPOC in particular, we will examine whether early engagement in extracurriculars and campus resources differentially mediate BIPOC healthy adjustment to college life.

## July 28, 2021 - 12:00 PM PDT Breakout 3: Sociology and Public Affairs Panel H

ANAYELI HERNANDEZ

California State University, Long Beach

[\*The Impact of COVID-19 on Asylum Applicants Fleeing to Costa Rica\*](#)

Asylum seekers in Costa Rica have been heavily impacted by the COVID-19 pandemic which has only further complicated existing immigration circumstances. This study analyzed semi-structured interviews with asylum seekers from various Latin American countries living in Costa Rica to address how the pandemic has affected asylum seekers' situations and prospects. Research suggests how the pandemic has impacted asylum applicants waiting in Costa Rica, making things worse for those trying to enter the country and obtain legal documents to work, due to the extensive wait times and the temporary shutdown of the immigration system. We find that asylum seekers face long delays for their cases that were exacerbated by the pandemic, which, in turn, generated severe economic and social uncertainty for asylum seekers and their families. Nicaraguan refugees, in particular, faced not only bureaucratic delays in the immigration system, but also widespread xenophobia and discrimination in society and the labor market. While the pandemic has had major impacts on refugee receiving countries around the world, this project gives insight into the response of Costa Rica and how their decisions affect thousands of asylum seekers.

CRISTIAN HERNANDEZ

University of California, Los Angeles

[\*Resilience in the Face of Adversity: Unaccompanied Minors Navigating the U.S. Immigration System\*](#)

Some scholars have begun to address the unjust treatment and inhumane conditions experienced by unaccompanied minors as they navigate the U.S. immigration system. Increasing attention has focused on the minors' capacity for resilience, yet, there is still much work needed to understand the resilience strategies unaccompanied minors use to adjust to life in the United States against such extreme adversity. Through semi-structured interviews and testimonios, the current study hopes to highlight how unaccompanied minors use resilience strategies to adjust to life in the United States while navigating an immigration system lacking procedural safeguards and concern for their wellbeing. I ask: What resilience strategies do unaccompanied adolescents use to adapt to life in the United States and cope with the trauma inflicted by the U.S. immigration system? This project provides an overview of the experiences of unaccompanied minors arriving in the United States and discusses the mistreatment they experience through U.S. immigration agencies, policies, and procedures involved in the immigration process (i.e., human rights abuses, inhumane conditions, and due process violations). I argue that U.S. immigration policy claims to support vulnerable unaccompanied minors but continues to accentuate their trauma, focus on the threat they may pose, and inflict further harm. This study calls for the improvement of policies and procedures, as well as comprehensive immigration reform addressing the needs of unaccompanied minors in order to protect their wellbeing.

SAMANTHA MAZARIEGOS

University of California, Los Angeles

[\*Defunding Immigration Detention: Assessing the Costs and Benefits of Alternatives to Detention\*](#)

Despite the rise in anti-immigrant policies and sentiment, the United States experiences an influx of immigration every year. The consequences of US immigration policies and their enforcement lead to declining health outcomes for immigrant populations and create socioeconomic disadvantages for these communities. Specifically, the practice of detention by Immigration and Customs Enforcement (ICE) costs more than alternatives and more severely places immigrants of all ages in traumatizing living conditions. This research will aim to answer: what are the economic and human welfare costs and benefits of defunding immigration detention and redistributing funds for migrants' well-being? The first part of the study will examine Alternative to Detention (ATD) case studies from various countries. The second part will be comprised of a social cost-benefit analysis of ATDs. In addition, interviews with stakeholders such as advocates, newly arrived migrants, second and third generation migrants, and government officials will be conducted. Based on the results, the study aims to put forward policy recommendations that take steps toward the abolition of the punitive immigration system currently used in the US.

## July 28, 2021 - 1:10 PM PDT Breakout 4: Arts and Multimedia Panel A

RHYSS TAYLOR

Eastern Michigan University

[\*Representation of People of Color in Contemporary Hollywood\*](#)

This research examines Hollywood's representation of people of color through analyzing the movies about race made in the last 20 years. It uses critical discourse analysis to compare and contrast how White directors and non-White directors represent people of color in race-themed movies through the use of setting, dialogue, and personal background. The results showed that both White directors and non-White directors discussed race through a variety of topics, genres, and settings. Moreover, White directors and non-White directors differed in the ways they perceived race and presented people of color through dialogues and visuals. The results identified the gaps between White directors' and non-White directors' understanding of race and representation of people of color. Future research can further analyze the impact of such representation on adolescences' self-esteem and self-

LAURA MIGUEL

Our Lady of the Lake University

[\*Latino News: A quantitative research about Latino news consumption and language preference\*](#)

According to the Latino/Hispanic Pew research Center, there are 60 million Latinos living in the United States. They have many choices to access news and can digest information in a variety of ways, in English or Spanish. This study focuses on language preference for Latinos when they consume news and how their language preferences impacts their Spanish/English bilingualism. A survey will be conducted in English and Spanish asking key questions about language preference, proficiency, age group, and social media platforms they use. Findings will provide valuable information about diverse approaches and practices Latinos use to access and consume news. Additionally, findings will give news organizations indicators to help them understand their audience and incorporate the best practices to target, attract, and retain this audience.

MIRKA DIRZO

University of California, Davis

[\*Stereotypes Affect Visualization of Migrants\*](#)

Previous research has documented the negative stereotypes of Latino migrants (Esses, 2021; Martinez et al., 2021; Sindic et al., 2018). Accordingly, we expected that visualizations of Latino migrants would be less positive than visualizations of U.S. citizens, and that visualizations of U.S. citizens would resemble a White person, whereas visualizations of Latino migrants would resemble a Latinx person. Results showed that migrant visualizations were rated as less healthy and less trustworthy but as lazier and more threatening than citizen visualizations. However, a growing literature argues that stereotypes about migrants are intersectional — depending on migrants' region of origin, race, and socioeconomic status (Lee & Fiske, 2006; Martinez et al., 2021). In another study, UC Davis students visualized faces of Canadian, Chinese, and Latino migrants, and U.S. citizens (Hutchings et al., in prep). The current work examines how naïve individuals evaluated these constructed faces in terms of competence, warmth, age, gender, threat, trust, and health. We predict that visualizations of US citizens will be evaluated as warmer, more competent, more feminine, younger, healthier, more trustworthy, less threatening, and having higher socio-economic status than visualizations of migrants. However, we predict that these differences will depend on the region of origin, such that if a migrant was from Mexico they would be perceived as more masculine and warm than a Chinese migrant. This work has important implications for understanding the connection between negative stereotypes and the visual representations of migrants, as well as advancing our understanding of intersectionality in social processes.

## July 28, 2021 - 1:10 PM PDT Breakout 4: Biology Panel B

DYLAN ZUVER

University of California, Davis

[\*Activity Budgets of Golden-Mantled Ground Squirrels in the Rocky Mountains\*](#)

Activity budgets reflect how an organism allocates its time over a day. Time allocation can have fitness consequences and might be influenced by a variety of factors. I will quantify activity budgets of golden-mantled ground squirrels at the Rocky Mountain Biological Laboratory to identify factors influencing time allocation, including the effect of predation risk on time spent vigilant, the effect of presence of conspecifics on time spent alert, and the effect of food availability on time spent foraging. I will collect my own data in the field, recording time spent foraging, alert, vigilant, running, grooming, and interacting, and I will also use existing data from a long-term dataset. To ensure data validity, only subjects that have been observed for 30 days with a minimum of 100 observations per subject will be used. To record my own observations, I will capture and mark squirrels with ear tags for permanent identification, and with unique dye marks on their fur for visual identification. I will conduct one-minute scan-sample observations to note what activity that squirrels in-view are participating in at time of recording. This research is the first of its kind for golden-mantled ground squirrels and will further our understanding of squirrel behavior.

CLEOPATRA BABOR

University of Nebraska–Lincoln

[\*The Breeding of Novel Colored and High Protein Quality Popcorn and Sweet Corn Varieties\*](#)

Corn nutritionally contains a low accumulation of complete proteins. A large fraction of the proteins found in the endosperm is zein proteins. Zein proteins are rich in glutamic acid, leucine, proline, and alanine, but lack the important essential amino acids lysine and tryptophan. The opaque-2 (o2) mutation found in flint corn decreases the number of alpha-zein proteins which in turn increases the amount of lysine and tryptophan found in the kernel. In colored corn varieties, such as glass gem popcorn, they have an array of pigments that are red, purple, and blue because of anthocyanins and carotenoids. These anthocyanins contain antioxidative and antimicrobial effects that are beneficial to human health (Khoo et al. 2017). In this research, we are working on three goals. The first is to breed varieties of high lysine sweet corn that will contain the opaque-2 allele mutation. The second is to breed colorful varieties of sweet corn that are aesthetic and high in antioxidants. The third is to introgress quality protein maize varieties into colorful popcorn varieties to make varieties of quality protein popcorn that are both high in lysine and antioxidants. For this study, crossbreeding and visual kernel assortment is used to select for desired phenotypic traits. Protein extractions, SDS-PAGE analysis, and PCR is used to ensure the presence of genotypic traits meeting the research's goal.

ALVIN SIHAPANYA, PAULINA MARTINEZ-KOURY

Westminster College

[\*Spatial Exploration of Microbial Biodiversity at Great Salt Lake\*](#)

Great Salt Lake (GSL) is an under-explored hypersaline system, a closed environment with a high salt concentration. In 1960, a rock filled causeway was constructed separating the lake into two distinct environments. The north arm was isolated from freshwater input resulting in 30% salinity compared to the south arm's 15%. These environments contain unique microorganisms called halophiles, meaning "salt-loving," which can be bacteria, archaea, algae, or fungi. Halophiles in the north arm endure several extreme conditions, such as high salt concentrations, desiccation through prolonged periods of extreme dryness, and high doses of ultraviolet light. The south arm, though less extreme, still presents these challenges, and the threat of increasing salinity is concerning here since this bay hosts microbialites, which are rocks built by photosynthetic microorganisms, and their input into the energy of the ecosystem is critical. Salinity influences the species of microorganisms present in these extreme environments. We hypothesize that microbial diversity will decrease as the salt concentration increases over a salinity gradient. Our research focused on the collection of water, microbialites, gypsum and halite samples to analyze and compare the biodiversity found in each arm of the lake. Each was analyzed using various microscopy and cultivation techniques, and molecular methods to assess genetic diversity. Our work may illuminate the impacts of salinity changes in the lake as GSL's shorelines recede, may help us understand the implications of shifts in microbial communities, and is an excellent analogue for ancient salt lakes that dried up on Mars billions of years ago.

## July 28, 2021 - 1:10 PM PDT Breakout 4: Chemistry and Biochemistry Panel C

SPENCER DANNER-BOCKS

University of Nevada, Reno

[\*PKA Mediated Amelioration of Mitochondrial Degradation in Alzheimer's Disease Models\*](#)

Alzheimer's disease (AD) accounts for one sixth of all deaths in the United States, as well as a fifth of deaths for those 65 and older. It is a neurodegenerative disease characterized by the accumulation of beta-amyloid, a post-cleavage product of amyloid precursor protein (APP), leading to the creation of reactive oxygen species (ROS) that promote mitochondrial degradation, a problem also found in Parkinson's disease (PD) models. In AD models, the fission protein dynamin related protein-1 (Drp-1), found on the outer mitochondrial membrane (OMM), is overactivated, thus leading to the constant breakdown of mitochondria and eventual neuronal death. We can combat this overactivation through utilizing the enzyme protein kinase-A (PKA), which is pulled to the OMM by the scaffolding protein dual specificity A-kinase anchor protein-121 (AKAP121), also found on the OMM. Once on the OMM, PKA works to inhibit the activity of Drp-1, thus alleviating mitochondrial degradation in AD models. My project will focus on two major facets of the AKAP121/PKA/Drp-1 relationship through: 1) testing pharmacological compounds on their ability to increase the level of endogenous AKAP121 in the OMM, and 2) determining whether modulating the level of PTEN-induced kinase 1 (PINK-1), which increases binding between D-AKAP121 and protein kinase A in the mitochondrion, will increase mitochondrial efficiency. By filling this knowledge gap, we draw closer to an eventual therapeutic drug that activates PKA as a source of protection against mitochondrial degradation in the brains of humans affected by AD.

KIRANDEEP KAUR

University of Wisconsin, Oshkosh

[\*Schistosomiasis\*](#)

Schistosomiasis is a neglected tropical disease that is caused by parasitic flatworms. This is usually found in third world countries such as the Middle East, South America, Southeast Asia, and sub-Saharan Africa affecting over 200 million people a year. Schistosomes reside in fresh water and penetrate the skin of their host when people urinate or defecate near fresh bodies of water or swim, wash, or clean in that water. The only clinical treatment available is Praziquantel (PZQ), which only targets adult worms and not juvenile larval stages. This raises the concern of emerging drug resistance and reinfection, which makes finding a new treatment to combat the high infection rates so much more important. We are looking at finding a new treatment that can be used instead of PZQ that will target schistosome neurotransmitter receptors which control muscle contractions. G-protein coupled receptors are the largest known superfamily of transmembrane receptors that play a role in biological processes like growth, differentiation, and neuronal signalling. GPCR's have been shown to be important drug targets because 30- 50 percent of all pharmaceutical compounds target GPCRs and GPCR-mediated signaling pathways. In this study, we predict and validate the existence of G-protein coupled receptors in the Schistosome genome to provide a resource for future drug discovery efforts.

MIA VANHOOREWEGHE

University of Wisconsin, Oshkosh

[\*Schistosome nAChRs as Novel Anti-parasitic Drug Targets\*](#)

Schistosomiasis is a neglected tropical disease that infects nearly 200 million people a year in various portions of the world. Today, there is only one known drug treatment: praziquantel. Our goal is to identify alternative therapies that may be used in the event of praziquantel resistance. Nicotinic acetylcholine receptors (nAChRs) are known targets for drugs that treat other parasitic infections, and so they are a logical place to search for new schistosomiasis therapies. My project is to identify these acetylcholine receptors from the parasitic worm *Schistosoma mansoni*, and clone them as a first step to studying them in the lab. I have done this using polymerase chain reaction (PCR) and molecular cloning techniques. With successful results, the next step is to inject the DNA sequence for our receptors into worms lacking nAChRs and determine whether they are functional. Functional clones will resolve the mutation and eliminate the paralysis. With this confirmation, we can move forward with anti-parasitic drug screening targeting these receptors.



## July 28, 2021 - 1:10 PM PDT Breakout 4: Clinical Medicine, Dentistry and Public Health Panel D

TESS MAXAM

St. Lawrence University

[\*Assessing the Devaluation of Nurses Through a Pandemic Lens: The Changes That Must Be Made to Protect Individuals Within The Nursing Field\*](#)

The COVID-19 pandemic exposed the crucial role that nurses play in the US healthcare system; they are the backbone of the medical industry and provide care that is crucial to maintaining the health of our population. However, the pandemic also made even more clear how undervalued nurses are in the healthcare workforce. Nurses are expected to navigate conflicting responsibilities to their patients, as well as themselves, while lacking protection from their government and also the industry they work in. Many issues in the nursing field become clear when observing the treatment and experiences of nursing during a pandemic; there are extreme psychological impacts that are not properly treated, a lack of personal protective equipment and unclear guidelines on how it should be used, insufficient support in the form of breaks and time off, and an often-judgmental work environment. The devaluation of nursing as a profession stems from gendered biases that nursing is “feminine” work, and therefore undeserving of healthy and supportive working conditions. Contempt and bias against the nursing field is not typically demonstrated in such a clear way, but instead concealed under “heroic discourse” that praises nurses for their bravery and sacrifice without any acknowledgment of nurses' struggles or needs. (Mohammed, et. al., 1) By observing inequities in nursing during a pandemic it is possible to recognize meaningful changes that must be made to offer greater support to individuals in this devalued field.

JAYLIEEN CAMACHO

University at Buffalo

[\*Telemedicine-Based Nursing Care: The More Convenient Way to get the Help You Need\*](#)

Telemedicine, the practice of virtual healthcare, is a practice that is growing rapidly in rural areas all around the United States. This type of healthcare technique is something that is both convenient and safe for people everywhere. With the impact that the Covid-19 Virus has had on the world today, it's important to take precautions and only go to hospitals when necessary. Most nurse practitioners (NPs) are not specifically trained in telemedicine and there are not good tools to assess clinical skill of NPs trained using video or virtual reality-based simulation. The proposed telephone-based nursing telemedicine clinical skill assessment and feedback tool is a potentially promising way to assess NPs clinical skill application. This project includes scenarios where telemedicine would be recommended and the positive impacts and outcomes it has for people ranging from infants to the elderly. Additionally, it's significant to note how much of a difference this kind of practice is and how much more convenient and safe it is compared to spending money on transportation, sitting in waiting rooms, and being around other sick people. The findings conducted from this project will help spread the word about telehealth nursing and urge patients to take advantage of it.

KAYCEY HENNING

University of Wisconsin, Oshkosh

[\*Effects of Isolation on Long-Term Care Residents During the Covid-19 Pandemic\*](#)

The Covid-19 pandemic has had a global impact with more than four million deaths, in particular those in long-term care facilities with 1 in every 12 residents succumbing to this disease. So much was taken away from these residents such as social interaction with others, opportunities to be physically active, visitations with loved ones, and so much more. Absent from the literature is the impact 12 to 18 months of social isolation had on the overall health of those who live in these facilities. The objective of this research is to determine the impact the isolation had on residents in one anonymous Wisconsin, long-term care facility by assessing non-Covid death rates, pressure ulcers, and weight loss of residents, with goal of identifying what mitigating interventions could be implemented in the future. This study compares March 2019-February 2020 data to the pandemic months of March 2020-February 2021. Preliminary results indicate that there were only two more deaths during the pandemic months; however, there was a substantial increase in pressure ulcers and weight loss which may contribute to an increased risk of deaths for long-term care residents. Additional data must be collected and analyzed to determine its statistical significance and draw more definitive conclusion.

## July 28, 2021 - 1:10 PM PDT Breakout 4: Education Panel E

ULISES GUZMAN

California State University, Long Beach

[\*Financial Literacy Exposure for College Students in Regards to Peer-to-Peer Lending\*](#)

Credit card debt, student loans and budgeting are familiar struggles for most university students working part/full-time jobs. Most college students are not ready to make good financial choices. Financial literacy is defined as the understanding and effective use of varied skills including budgeting, investing and financial management. Introducing financial literacy to college students can help them mitigate risks and focus on studies with maximum return within their classes.

College students, especially first-generation ones, face numerous additional challenges such as “helping family needs” and “cultural language. Sources of support include financial literacy workshops and financial aid specialists such as Educational Opportunity Program. Overall, students need to maximize financial aid and scholarships before taking on loans and additional credit card debt. Safe fintech application use must include behavioral knowledge as well as common heuristics in Peer-to-peer lending.

Peer-to-peer lending is a process for individuals to borrow from strangers online without a middleman. Interest rates are competitive compared to credit card rates, attracting investors. Loan applications are open to lender bets for two weeks and include loan size, purpose, repayment conditions and the credit rating allocated. Criteria such as a bank account, a social security, and minimum FICO score are required.

Strong financial literacy skills can help students manage their money wisely in order to minimize borrowing or perhaps become an investor through any peer-to-peer lending platform. In addition, we need to be aware of international differences in regulation and markets to choose the most advantageous options.

DORIAN BOBBETT

University of Nebraska–Lincoln

[\*Engineering Faculty Experience During Emergency Remote Teaching: A Case Study\*](#)

In March 2020, colleges and universities around the world abruptly transitioned from in-person teaching to emergency remote teaching. This change gave faculty a few weeks, or less, to alter their teaching methods to accommodate remote learning for the rest of the semester, and minimal time to adjust for the following school year. The purpose of this case study is to examine how one engineering faculty member responded to this change in teaching format through a lens of adaptability. This case study focuses specifically on how their emotions, conversations, resources, successes, and challenges changed over the course of remote instruction, and provides context for these changes. Data was collected from faculty surveys across the Spring 2020, Fall 2020, and Spring 2021 semesters, as well as from interviews throughout those same semesters to gain an overall perspective on their experiences, as well as how they adapted over time. The data was coded deductively for cognitive, behavioral, and emotional adaptability to experiences and descriptive quotes are included. Cognitive and behavioral adaptability illustrate an ability to regulate the way one thinks and acts, respectively, in new situations. Rich descriptions of the context for faculty adaptability over time are presented and discussed. Developing a holistic understanding of the way engineering faculty experienced teaching during the pandemic is vital for the creation of faculty support systems at institutions of higher learning. This case study helps to lay the groundwork for understanding the future of engineering education in periods of new, changing, or uncertain circumstances.

KAMALI CLORA

Wayne State University

[\*How to Develop a Black Student-Led Support Infrastructure at A Predominantly White Institution\*](#)

Since 2016, Wayne State University (WSU) has utilized a tiered, culturally competent approach to support Black male students. WSU is the nation’s fastest-improving university for graduation rates from 27% to 47%. This movement sprouted the commencement of programs and organizations focused on narrowing the student population achievement gap including men of color. Warrior VIP is a program that fosters belonging and community for students through the scholastic support and professional development. The Office of Multicultural Student Engagement centers on diversity and inclusion. A learning community coined The Network, is tailored towards the recruitment, retention and success coaching of Black men. The approach highlighted in this presentation is THE BROTHERHOOD, a student-led organization geared towards undergraduate Black men. This tier of the larger initiative concentrates on social action and student engagement, while encompassing facets of academic, social and emotional wellness. Through empowerment, identity, mentoring, and community, THE BROTHERHOOD aims to avail minority males to become successful college students today and future leaders of tomorrow.

## July 28, 2021 - 1:10 PM PDT Breakout 4: Psychology and Cognitive Science Panel F

DIANE TORRES

Purdue University Northwest

[\*Are Current Prevention Measures for Stalking Enough?\*](#)

Stalking behaviors are far more recognizable today by students, adults, police officers, and the criminal justice system. However, awareness of what behavior constitutes as stalking behavior has not increased the quality of police officers' responses to these low reporting outcomes from victims, inconsistencies in recognizing the severity of the stalking complaint, or pursuit of arrest charges (Backed, Fedina, & Holmes, 2020; Campbell & Moore, 2011; Lynch & Logan, 2015). This paper explores the gaps between police officers' responses to filing stalking reports and pursuing stalkers' arrests. The purpose of this review of the literature is also to evaluate stalking prevention measures by examining the efficacy of current practices in a sample of police officers residing within the United States. It is hoped that new strategies for promoting more consistent and protective measures for stalking victims can be identified. Possible suggestions for improvement in prevention practices will be explored based on the review's findings.

JADA EDWARDS

Purdue University Northwest

[\*Healthcare Employees' Perceptions of Policies and Procedures\*](#)

Working in healthcare especially in today's time takes an emotional, mental, and physical toll on one's everyday life. Going to work should not feel like a chore and with the help of those in higher up positions they should do everything they can to ensure their employees feel valued. Many the policies and procedures regarding how things are done regarding everyday patient care are made by those in upper management positions. I am studying how healthcare workers feel about policies and procedures that are created by management although those individuals are often not directly involved in patient care. This study focuses on healthcare workers' attitudes towards their job including perceptions of job satisfaction, justice, and voice. I surveyed healthcare workers on what their thoughts were regarding these topics. With my findings, I hope to provide recommendations for those in upper management positions as well as inspire others to do further research on this topic.

MOHAMMAD SADIQ WISWALL

Rutgers University

[\*Decision-Making Under Risk & Uncertainty: How Rural Bangladesh Can Inform Behavioral Economics About Risk Attitudes\*](#)

Behavioral and experimental economics has mostly focused on sample groups consisting of university students in developed nations. This lack of representation in the experimental literature has two large implications. In the aspect of theory, these samples often are not representative of the general population, therefore, raising questions about theories based on these experiments (Harrison et al., 2010). Furthermore, studies on economic behavior in developing nations can inform policy to create equitable economic growth. In contrast to developed nations, citizens in Bangladesh face a moderate to a high level of risk (Export Finance Australia, n.d.). This study focuses on risk attitudes in rural Bangladesh by implementing a simple choice lottery game (Filiz et al., 2020). Our study is interested in two questions. Will results differ from previous findings in developed nations? How will variables such as poverty, illiteracy, savings, and land ownership influence risk attitudes? We hypothesize high poverty rates in Bangladesh will cause subjects to be more risk-averse than risk-loving. Further, we hypothesize results will differ from behavior in developed nations due to variables such as poverty, etc.

## July 28, 2021 - 1:10 PM PDT Breakout 4: Sociology and Public Affairs Panel G

ALEZJA SIMPKINS

California State University, Long Beach

*Evaluating the effectiveness of outreach programs amongst underrepresented communities in California's Rental Assistance Program*

This project evaluates the effectiveness of outreach programs in underrepresented communities in California's Rental Assistance Program. More specifically, this project assesses the Covid-19 rental relief outreach process, with a focus on the barriers and modifications needed to make the application more accessible for those seeking relief. There has been an increase in rent burden and extreme housing displacement since the onset of the Covid-19 pandemic. This study conducts qualitative research methods consisting of two focus groups (Latinx and Chinese communities) to show how lack of trust and or lack of accessibility effect people's access to rent relief. The data shows that lack of trust in landlords, immigration status identification, and verifying their source of income creates barriers to rent relief. As well as by a lack of access to technology, the application itself, and language translation. By making these changes we can improve the application and thus create greater access to rent relief.

LILIA MARTINEZ

California State University, Long Beach

*Labor Struggles of Chicanx and Latinx Peoples in the United States*

Since the 1940's and 1950's labor union representation has steadily declined to some of the lowest points in the last century; and among varying demographics of workers, of which are uniquely affected by the context of labor in America, one demographic has remained consistently underrepresented and under organized, despite the size of their population. The goal of this research is to understand the labor struggles of Chicanx and Latinx peoples in the United States and try to understand how Labor Unions are attempting to organize them and asses if they are being successful. Furthermore, this will be a heavily exploratory research project, and the starting point of this project is first to grasp the history of Mexican/Latino labor in the United States. Upon doing so, we will develop prescriptive solutions to common organizing roadblocks, by first establishing which tactics have proven to work greater than others.

SAMUEL SNELSON

University of California, Davis

*MR*

California's system of school finance has undergone drastic changes shifting control long held by the state to school districts. From the early 1970s to the early 2010s, California closely regulated the financing of its public school system. However, 2013 brought on a shift back to local control and discretion over spending with the condition that districts engage constructively with their communities to determine local spending priorities. Existing research has assessed the efficacy and equity of the finance system change (and for whom it is and isn't equitable) as well as challenges with productive community engagement. This study extends on past work by examining quantitative associations between district spending patterns between 2014 and 2020 reported in Local Control and Accountability Plans and district-level socio-demographic (district ethnoracial composition, student enrollment and demographics) and -economic factors (district budget, median property value and income) measured by the American Community Survey (ACS) and California Longitudinal Pupil Achievement Data System (CALPADS). Associations between district spending patterns and their demographic and economic make-up provides a standardized state-wide proxy estimate of the actualization of local spending priorities. If districts are defining local spending priorities which reflect their community and are reflected in their actual spending, they are working to fulfill the promise of local control; otherwise, both school districts and California must work to realize and practice community engagement for the interest of all students and communities.

## July 28, 2021 - 2:20 PM PDT Breakout 5: Humanities Panel A

ANDREW CHANDAR

California State University, Long Beach

*Appalachian Folklore as a source for the study of American Religious History*

My research topic is within the discipline of the History of Religion. The scope of the research is the study of witchcraft and its relationship to Scots-Presbyterian Christians within the Appalachian mountain range. This relationship is presented through the literary works of Manly Wade Wellman, a popular pulp magazine writer in the 50s and 60s, and his fictitious character John the Balladeer. The character is solidly rooted within the socio-economic environment of Appalachia and although not a learned individual, he is a repository of folklore and religious traditions. Belief in witchcraft was widespread in Appalachia and folklore has a significant role to play in the recreation of those beliefs. These beliefs began to be lost with the inception of Franklin D. Roosevelt's Tennessee Valley Authority in the 1930s. The TVA bridged the divide between the more isolated and inward-looking Appalachian region and the outside world through electricity. But as radios, telephones and so forth became common, many of the indigenous folk traditions disappeared. A native of the region, Wellman's stories preserved many Appalachian beliefs that have since been lost and brought into high relief the inherent moral ambiguity that existed between folk beliefs and the strict form of Presbyterian Christianity that had been brought to Appalachia by its Scots-Irish immigrants. In doing so, he not only preserves many now forgotten Appalachian folk beliefs, but also serves as a window into the larger question of how the people of Appalachia reconciled folk beliefs with a particularly strict Christian belief system.

ARIAH ALBA

St. Edward's University

*Technological Transformation of the Church: A Case Study of Churches in Austin during COVID-19*

This research project explores how churches in the Austin metropolitan area responded to challenges of COVID-19 by drawing on technology to meet the needs of their congregation. As the majority of places of worship were unable to congregate as communities for worship, fellowship and service, churches--just as occurred in other areas of society during the pandemic--turned to technology for communication and synchronous gatherings. Some churches already had some facility with and use of technology pre-pandemic but other churches had a technological learning curve. Thus, one hypothesis explored in this study is whether in-person church gatherings transitioning online came with challenges to the church body, church leadership, and church volunteers as the need for labor, technology, and outreach towards the congregation grew. The project is rooted in case studies of three non-denominational churches in Austin, which are distinctive in terms of size; these churches range from medium (approximately 300 persons) to large (approximately 2,000 persons) in terms of attendees. Through interviews with pastors at these churches and surveys with church leadership, the study explores what these respective churches learned about their technological needs and capabilities through the course of the pandemic in response to changing worship experiences during the pandemic.

TE'AIRRA DECOUNT

University of Nevada, Reno

*Parent-Child Religiosity Transmission: The Effects of Mandating Religiosity*

The transmission of religion from parent to child is often anticipated by many religious parents. However, whether or not the adult child continues to practice their family's religion after leaving their childhood home is their personal decision. The number of emerging adults in the U.S. who depart from their childhood religion after leaving their family of origin continues to increase. The current literature surrounding Religion/Spirituality points to the importance of children maintaining religious autonomy to develop a deeper relationship with religion in adulthood. The following study intends to determine the likelihood of emerging adults continuing to affiliate with their family's religion depending on whether they perceive religion as mandated or voluntary in their family of origin. Preliminary data has been collected through the university's SONA system, a database in the Department of Psychology that allows students to sign up and participate in university-based research. Emerging adults, ages 18-26 years old, at the University of Nevada, Reno (N= 804) participated in a mixed-methods study to communicate their childhood experiences with religion. In addition, they report on information comparing the way their experiences set the tone for their current relationship with religion. We aim to diminish a gap in present literature by particularly detailing adult children's perception of religious practices.

## July 28, 2021 - 2:20 PM PDT Breakout 5: Math, Stats, and Physics Panel B

DELONTE GOODMAN

Kent State University

*Impacts of Organic Semiconductor Thickness in Organic Field-Effect Transistors*

Organic electronics is a field that has had many new developments over the years. Organic electronics allow for the creation of flexible and even stretchy electronics. They also have many applications in fields such as medicine and materials. For example, an organic semiconductor can detect chemical changes in a person's body from the charges molecules produce. The research will focus on learning the fundamental mechanics of organic semiconductors and organic field-effect transistors (OFETs). Different concepts related to electricity and the flow of current will be reviewed and similar experiments and research done by other scientists in the same field will be summarized. After gaining a better understanding of how organic semiconductors work, new OFETs will be designed based on the semiconductor pentacene. The influence of the thickness of the pentacene layer on the device performance will also be analyzed. A paper detailing the results and lessons learned throughout the summer will be prepared. Expected results of the research is gaining experience working with organic semiconductors and performing scientific analysis on them. In conclusion, a better understanding of organic semiconductors and OFETs will be gained.

ALAN BRICENO

The University of Arizona

*Optical response in atomically thin Indium Selenide*

The potential applications of atomically thin, two-dimensional materials such as indium selenide (InSe) in the field of conversion photovoltaic technology have shown promise in next-generation solar energy-efficient devices.

To reach the goal of photovoltaic devices the quality of InSe monolayers needs to be considered which depends on the type of processes that have been followed in its creation and subsequent annealing treatments that have been applied. Obtaining monolayers of InSe of the highest possible quality provide higher carrier mobility for a desired photovoltaic performance.

Each atomically thin sheet of InSe is composed of four monatomic layers in the Se-In-In-Se sequence, in such a way that each two-dimensional sheet exhibits a hexagonal structure and the links between them are covalent which could lead to further investigation of transport properties and scattering mechanisms of high-mobility atomically thin, two-dimensional materials. Furthermore, InSe encapsulated by hexagonal boron nitride (hBN) addresses the issues of intrinsic doping in silicon dioxide (SiO<sub>2</sub>) by exhibiting enhanced mobility and reduces the carrier inhomogeneity. The scarcity of experimental data suggests that features of InSe are limited due to degradation in ambient conditions, probably due to chemical reactions such as oxygen and water in the air which leads to the biggest obstacle to practical applications. In this study, we desire to create a photovoltaic device in an inherited atmosphere such as a glovebox to observe high carrier mobility in InSe that could lead to potential applications in diverse areas such as photo-electricity, catalysts, and transistors.

ALYSSA SIMPSON

University of Nebraska–Lincoln

*Ferroelectric domain studies in free-standing PbZr<sub>0.2</sub>Ti<sub>0.8</sub>O<sub>3</sub> membranes*

We report a comprehensive ferroelectric domain study of free-standing PbZr<sub>0.2</sub>Ti<sub>0.8</sub>O<sub>3</sub> (PZT) membranes. These were 50 nm epitaxial PZT thin films deposited on Sr<sub>3</sub>Al<sub>2</sub>O<sub>6</sub> (SAO) buffered LaAlO<sub>3</sub> (LAO) substrates using off-axis RF magnetron sputtering. The as-deposited thin films are monocrystalline with no impurity phases, as confirmed by x-ray diffraction (XRD) measurements. Atomic force microscopy (AFM) studies show smooth surfaces with the (Root Mean Square) RMS roughness of 0.3 nm. We then immerse the samples in water to dissolve the SAO buffer layer and transfer the suspended oxide membranes onto different conductive substrates, including Au and LSMO/STO. The RMS roughness of the PZT membranes increased to 0.8 nm after transfer, while XRD studies show they maintain the crystallinity. Piezo-response force microscopy (PFM) measurements revealed a uniform polarization down state for both samples, while the switching field of the PZT membranes transferred on Au is slightly higher than that transferred on LSMO/STO. We also systematically discuss the effect of the bottom electrode type on the domain wall roughness and creep behaviors of PZT membranes.

## July 28, 2021 - 2:20 PM PDT Breakout 5: Psychology and Cognitive Science Panel C

MARISSA LUNA

The University of Arizona

*Substance Abuse and its Effect on Depression Predictors*

Depression is one of the most common mental health disorders, affecting 7% of adults in the United States every year. One common trend found in adults suffering from depression is substance abuse of illicit drugs or alcohol. The aim of this current study is to indicate the significance of substance use as a predictor of depression in adults ages 18-30. An analysis of adults (n=268) and their depression and substance use levels was conducted to see if substance use affects their traits and state characteristics of depression (e.g. loneliness, history of depression, control over future events, timeframe of thoughts, and negative thoughts). This analysis was done using an app called "Mind Window" that identifies patterns of user's thinking by asking questions about their thoughts at random times throughout the day along with established questionnaires to assess trait-level characteristics. Examining depression as an outcome variable, linear regression models were used for the two parts of this study. The first is an analysis of non substance users and individuals who indicated substance use, to see how this difference may affect their depression predictors. The second part analyzes substance users and how different levels of intake have an effect on the outcome variable of depression. This is an ongoing analysis and current results are not yet available. The results of this study should indicate whether substance users differ from non substance users in terms of depression outcomes and how the level of substance intake may play a role in this.

JOCELYN COVARRUBIAS

University of Nebraska–Lincoln

*Gender Differences of Men and Women Sexual Assault Survivors: An Examination of PTSD and Alcohol Use*

Experiencing sexual assault can increase the risk for posttraumatic stress disorder (PTSD; Dworking, 2020). PTSD has also proven to be highly comorbid with alcohol use in college students (Griffin et al., 2014). Although gender differences have been studied regarding PTSD and alcohol use separately, gender differences in comorbidity are less well understood, especially after a sexual assault – a research area that has focused on women. To build on prior research, we examined if PTSD symptom severity and alcohol misuse after a sexual assault were associated and how this association differed by gender. For this study, 848 cisgender men and cisgender women undergraduate students were recruited from the University of Nebraska-Lincoln and consented to an online web-based study. Participants filled out a survey concerning gender identity, sexual assault victimization (Modified Sexual Experiences Survey), PTSD severity (PTSD Checklist of DSM-5), and alcohol misuse (AUDIT-C). Participants who reported sexual assault were categorized into four groups: (1) PTSD only, (2) alcohol misuse only, (3) both, and (4) neither. It was hypothesized that women will demonstrate higher rates of PTSD compared to men, and men will demonstrate higher rates of high-risk drinking than women. Women are expected to be more likely than men to report co-occurring PTSD and high-risk drinking. Analyses will be conducted using chi-square tests in SPSS. These findings can help psychologists understand gender differences in recovery.

LILLIAN STONEBRAKER

Westminster College

*Tell Me More, Please: How Language Use Can Be Indicative of Substance Use*

To better understand substance use, this pilot study focuses on how people's language may reveal their relationship to substances on a spectrum from healthy to unhealthy usage. Because psychological research is heavily biased toward studying problematic substance use, we will add to this literature by exploring what healthy usage looks like. Additionally, while much literature focuses on how language can reveal underlying psychological states, there is a gap where substance use is concerned. Data will be collected from a nonclinical, convenience sample who will fill out an online survey consisting of three parts. As part of the project, participants will (1) provide a writing sample directed by a prompt, (2) fill out a quantitative survey on frequency of substance use, and (3) complete the Substance Use Spectrum Scale. Researchers will use the Linguistics Inquiry and Word Count (LIWC) computer program to analyze the writing samples. Pearson's correlations will be run between each participant's linguistic style and substance use patterns. We expect that participants' use of function words will correlate with their scores on the frequency scale and Substance Use Spectrum Scale. This study is exploratory in nature because the gap in research is large, but the opportunities are vast. Understanding how language can reflect patterns of substance use can inform diagnostics, treatment options, and future research.

Abstract titles link to event detail pages.

## July 28, 2021 - 2:20 PM PDT Breakout 5: Psychology and Cognitive Science Panel D

MIRANDA CREED

Purdue University Northwest

[\*The Study of Parental Perceptions of Child Social Media Usage\*](#)

Social media apps that are currently popular with adolescents include TikTok, Snapchat, and Instagram. Surveys have shown that 90% of teens use these apps as reported by the American Academy of Child and Adolescent Psychiatry (2018). The growth of underaged social media users is concerning due to the addictive potential of these platforms. According to Hillard (2019) at the Addiction Center, excessive social media usage can be harmful for children and negatively impact their mental health and interpersonal relationships because their brains and social skills are still developing. The purpose of this study is to examine, from the parents' perspective, the impact social media usage has on the parent-child relationship and on their child's academic performance. To fulfill this purpose, a survey has been constructed and distributed on Amazon Mechanical Turk. Participants are parents over the age of 18. They are asked to describe observations they have made regarding the amount of time their child spends on social media per day and their beliefs regarding the affect it has on the child's academic performance. Additionally, participants are asked about their observations and opinions regarding social media use during family time. It is hypothesized that, if children exhibit signs of social media addiction, parents will have a negative perception on the quality of the parent-child relationship. It is also predicted that parents' report of academic performance will be negatively correlated with reports of time spent on social media per day.

MIRANDA SIMS

Purdue University Northwest

[\*Social Media and Self-Perception: Do They Think They Have an Eating Disorder?\*](#)

Social media and its positive or negative impact have been up for question since its emergence. It not only provides entertainment, but business opportunities and the benefits of it seem so substantial that its negative effects are rarely discussed. One such impact would be the effects of social media on young women and their self-image. In this study, the perception of cis-gender females, ages 18-25, and their belief of whether or not they have an eating disorder will be assessed. Does social media cloud the mind of what is considered a "healthy diet," or starvation? Does social media encourage body checking, a component of eating disorders brought on by unrealistic standards of beauty? A survey has been created and distributed on Amazon Mechanical Turk (MTurk) addressing demographics (sex, gender, age, and ethnicity), how many hours spent on social media, and the type of content engaged in (food, comedy, fitness, etcetera). Questions on eating disorder symptoms and body checking behaviors were analyzed using the Eating Disorder Examination-Questionnaire (EDE-Q) developed by Fairburn & Beglin (1994) and the Body Checking Questionnaire (BCQ) developed by Reas et al. (2002). It is hypothesized that an increased amount of social media consumption and increased endorsement in influencers (celebrities, models, personalities), fitness, food, beauty, health/diet, and fashion will correlate positively with body checking behaviors and eating disorder symptomatology. With this increase in social media consumption, body checking behaviors, and eating disorder symptomatology, the participant will not perceive they have an eating disorder.

CINDY BERGANZA

University of California, Los Angeles

[\*Online Politicking: The Effects of Social Media on Contemporary Activism\*](#)

Activism throughout the 21st century has been greatly impacted by the growing relationship of technology and the political sphere. However, the impacts of social network sites (SNS) on the political mobilization of young racial minorities have not been analyzed. This project examines the impact of social media on contemporary activism amongst college students of color. More specifically, the study explores the psychological processes by which social media mobilizes college students of color to engage in activism. Survey data will be collected to measure social media use, political engagement, and demographic information (e.g., racial/ethnic background). An experiment will also be designed to test how mere exposure of political content on social media promotes mobilization. Lastly, interviews will be conducted that focus on UCLA students who lead politically active organizations (e.g., MEChA) to investigate how they used social media to organize political activism during the 2020 George Floyd protests. The findings will provide greater insight into how social media contributes to contemporary activism, and if it increases political engagement within youth of color. With this insight, political scientists will be able to explain and further promote patterns of online interaction, in order to influence political participation, on and off the screen.

Abstract titles link to event detail pages.



## July 28, 2021 - 2:20 PM PDT Breakout 5: Psychology and Cognitive Science Panel E

EMERSON TEJEDA

John Jay College of Criminal Justice

*Colorism: A qualitative study on the mental health status of LGBTQ+ people of the African Diaspora.*

Colorism, the system or culture in which people with lighter skin tones are preferred or privileged over those with darker skin, is controversial and taboo in many communities of color. Within the Black diaspora, colorism has become so ingrained into families and communities, that it has become a reinforcer of white supremacy on a macro level. On the micro-level, previous studies have noted how colorism is a predictor of internalized self-hate, feelings of inadequacy, and imposter syndrome. However, few studies examine how sexual orientation and gender identity influence skin stratification and how colorism could possibly alter the experiences of lesbian, gay, bisexual, transgender, queer, and other non-heterosexual or non-binary (LGBTQ+) people. The purpose of my study is to explore how LGBTQA+ identifying people who are part of the African Diaspora, experience colorism in comparison to their heterosexual counterparts. Further, my study will examine how colorism affects the mental health status of LGBTQ+ people of the African Diaspora.

DANIEL NGUYEN

University of Nebraska–Lincoln

*LGBTQ+ people of color's experiences of community bias and discrimination, identity integration, and well-being*

Intersectionality, the idea that people have multiple social identities, which interact to influence experiences and interactions, is important for well-being. This is true for individuals who carry multiple stigmatized identities and for those with only one stigmatized identity. Much of the current research does not serve to distinguish between the different experiences of LGBTQ+ Whites and people of color. The current research aims to understand 1) differences in well-being between LGBTQ+ Whites and people of color, 2) how race/ethnicity impacts the process of coming to terms with one's LGBTQ+ identity, 3) discrimination and bias in one's racial community and the LGBTQ+ community, and 4) identity integration. LGBTQ+ individuals aged 17+ were recruited to complete a survey (n=38) and a qualitative interview (n=21) to assess factors that influence well-being and explore the differences in understanding of LGBTQ+ identity. Results indicate that for POC, race may be an obstacle to coming to terms with LGBTQ+ identity. Participants of color more often discussed biases against LGBTQ+ coming from their racial community. At the same time, racial bias was noted to be present in the LGBTQ+ community. Such experiences were found to have implications for well-being. Our findings suggest that discrimination and bias, community, identity, and well-being must be understood in the context of multiple identities. While research that only focuses on gay, cisgender, and/or White individuals provides useful insights into the LGBTQ+ community, it is imperative that future research on queer and trans people integrate race as a factor.

JOSSELYN TELULE

University of Nebraska–Lincoln

*Affirming Psychotherapy for Transgender and Gender Diverse People: Understanding Affirming, Neutral, and Marginalizing Experiences in Therapy*

Currently, there are minimal guidelines established to assist therapists working with transgender and gender diverse (TGD) folx (American Psychological Association, 2009) and many are outdated or ambiguous. The purpose of the present study was to test whether therapeutic guidelines for working with TGD people were seen as effective and which aspects were most helpful. Fifteen participants from a larger study watched four consecutive video segments depicting mock therapy sessions in which the therapist's behavior was either affirming, neutral, or marginalizing of the client's TGD identity. Participants rated the effectiveness of each session at reducing the client's distress using the Session Rating Scale (SRS; Miller, Duncan, & Johnson, 2002). Following the last video, the participants were asked about their perceptions of the therapist's behavior throughout the sessions. ANOVA results showed a significant difference between the three conditions ( $F(2, 12) = 30.83, p < .001$ ); affirming therapy was rated as more effective than neutral and marginalizing therapy. Thematic analyses revealed three main themes of affirming, effective therapy: (1) therapists understanding nuances between TGD identity and mental health, (2) therapists actively working to mitigate fear of marginalizing therapy, and (3) therapists fostering pride in one's TGD identity. It was also found that, regardless of what video they were assigned, participants emphasized a dire need for therapists with more extensive training on working with TGD clients, because many have experienced prior therapy resembling the neutral and marginalizing videos. These findings provide support for updated training and guidelines focusing on competency with TGD identity.

## July 28, 2021 - 2:20 PM PDT Breakout 5: Psychology and Cognitive Science Panel F

MIGUEL BARRERA

Our Lady of the Lake University

*How does emotional and practical support impact veterans with PTSD in achieving higher education goals?*

Veterans, as well as military service members, are having challenges adapting to civilian life. Many of our veterans return from deployment with emotional and cognitive trauma; yet they are coming back from military service seeking to pursue a higher education. Evidence shows that the challenges that veterans face when transitioning from a military life to a college life can be challenging for them emotionally as well as academically. Often, these veterans do not have the proper support to help them through this new chapter in their life. Giving veterans the proper emotional and practical support is crucial because otherwise they encounter difficulties in achieving their goals. Particularly after coming back from deployment, they need support and reassurance that they are going to be helped. (S. Lopez, 2014). Research has shown, for example, that veterans with PTSD in college get less sleep than the usual college students. Studies also indicate that if a veteran does not get the proper care for their mental disorder, they will have a very difficult time achieving their educational goals. (M. Lopez, 2017). Findings from research illustrate that the psychological impact of combat-related trauma exposure can impact classroom integration and academic achievement when there is not compensating support. This study addresses variables of support and how that helps in the college success of veterans.

CHARTAYIA CREAR

Westminster College

*Impact of racially violent social media content on academic performance for African-american college students*

Recent literature has emerged demonstrating a positive association between violent social media content and symptoms of trauma or symptoms of post-traumatic stress disorder (PTSD). Social media has also been found to negatively impact academic performance for students in middle school through college. To date, however, research has failed to adequately investigate traumatization through social media and its impact on academic performance. In fact, criteria for diagnosing PTSD currently does not encompass racial experiences with trauma, nor does it consider social media as a context in which trauma can occur. Additionally, none have extended the effect/influence of social media to academic performance. This is especially important for Black students, as the majority of problematic content on social media features violence against members of their own community. Using Carter's (2007) more inclusive framework of Race-based Traumatic Stress Injury (RBTSI) and following the emerging literature linking violent social media content with trauma, this study will investigate the relationship between social media use and race-based traumatization. The subsequent impact on academic performance will also be investigated. This framework will help educators, administrators, and counseling centers better understand and address a unique and pressing challenge facing today's Black scholars.

KATIE PERRY

Westminster College

*Test Anxiety and Self-Regulation in College Students with ADHD*

Taking the end of semester finals is a difficult time for college students, especially for students with ADHD. Not just because of stress, but because people with ADHD struggle with an executive function called self-regulation. An important aspect of self-regulation is inhibitory control which helps most people filter out distracting thoughts, emotions, and other internal or external stimuli. This means that people with ADHD have a harder time filtering out stimuli, especially when taking tests without accommodations. This can lead to emotional distress. Emotional distress while testing is commonly referred to as test anxiety. Testing can often bring uncomfortable thoughts and emotions to the front of the mind which can be detrimental to test performance and the mental health of those it affects. Using a combination of the Current Behavior Scale, Deficient Self-Regulation Measure, and the Multidimensional Test Anxiety Scale, I will conduct a qualitative survey to examine the correlation between test anxiety and poor self-regulation in college students with ADHD. I will send the survey to a sample of college students with ADHD through centers for disability services at multiple colleges in the state of Utah. This data will then be analyzed to determine if correlations between test anxiety and self-regulation in students with ADHD exist.

## July 28, 2021 - 2:20 PM PDT Breakout 5: Psychology and Cognitive Science Panel G

AUDRIANA GREGORIO

California State Polytechnic University, Pomona

[\*Emotional Memory Encoding\*](#)

Emotions have a powerful influence on memory formation. We know that aspects of memory, including how and where in the brain they are formed, can differ depending on the valence of the stimuli. It is theorized that emotional events and experiences tend to be remembered with greater clarity and detail in comparison to unemotional events or neutral experiences. Over the past decade there has been a growing interest in understanding the brain mechanisms associated with the formation of emotional memories. When emotionally arousing stimuli are encountered, the interpretation and significance of that emotional experience influences the neural activity and interactions of different memory regions within in brain. Research studies using fMRI data have been used to identify the neural correlates of emotional memory encoding. The majority of these fMRI studies have provided evidence that there is consistent functional interactions between the amygdala and prefrontal medial temporal lobe structures, which includes the hippocampus. These two systems appear to be responsible for the formation and storage of emotional memories. This meta-analysis aims to identify how emotion influences memory encoding and consolidation, and the brain regions that are associated with emotional memory formation. It also aims to distinguish the contributions of each identified region and structure. It is anticipated that this research and future research of emotional memory could provide insight regarding the neural structures that regulate emotions, which could aid in the development of more effective strategies for psychological interventions and treatments for individuals who have experienced emotionally traumatic events.

NATALIA N. JACOBSON

The University of Arizona

[\*The Interplay Between Social Status and Short-Term Memory For Faces\*](#)

Social hierarchies are organizational structures established in human and non-human primate societies. These structures help provide a framework for the group's survival by distributing responsibilities based on social rank. It is important, therefore, to understand how social rank affects decision-making. As previous research affirms, male viewer monkeys are willing to sacrifice a food reward to view a higher status conspecific. Additionally, a visual-paired comparison (VPC) task found that monkeys, as well as humans, show a preference for conspecific novel faces over their familiar counterparts. The goal of my study is to determine whether a rhesus macaque prioritizes social rank over novelty while performing a VPC task with stimuli of conspecific novel faces. For the VPC task, we generated multiple virtual social hierarchies among four individuals aligned along a strict linear social dominance designated as Alpha, Beta, Gamma, and Omega. Social rank prioritization will be quantitatively measured using eye movement of the viewer monkeys. We focus on two measurements in the VPC task: (1) errors of choosing the familiar over the novel and (2) reaction time when deciding between familiar and novel. If the subjects make more errors when the familiar monkey is dominant, we will conclude that the preference for looking at the dominant individual supersedes novelty preference. Also, if the reaction time is longer during error trials when the dominant familiar monkey is chosen over the subordinate novel monkey, we will conclude that the subject experiences a conflict between these two imperatives of allocating visual attention.

CHELSEA ANOWI  
Westminster College

*A Review on the Measures and Methodology in Implicit Attitude Research*

Implicit attitudes are defined as unconscious and inaccessible object evaluations. For decades, researchers have sought to explore and understand implicit attitudes and uncover them in individuals, and identify the role implicit biases play in behavior. The purpose of this review article is to examine information on the five most commonly used measures of implicit attitudes: The Implicit Association Test (IAT), The Extrinsic Affective Simon Task (EAST), the Go/No-Go Association Task (GNAT), the Affect Misattribution Procedure (AMP), and the Evaluative and Semantic Priming Tasks (Greenwald, et al., 1998; De Houwer, 2003; Nosek & Banaji, 2001; Payne et al., 2005). This article will review each instrument, their psychometrics external validity, internal validity, and examine how they measure implicit attitudes. In examining these measures, this article will highlight the role internalized cultural norms, classically conditioned defaults, and priming play in implicit attitudes. How do these roles affect the validity and usefulness of popular measures of implicit attitudes? The intention of this article is to compile a comprehensive and accessible research review on the measures and methodology associated with implicit attitudes, as well as the greater social implications of internalized cultural norms and the role society plays in creating and instilling those norms in individuals. Understanding implicit attitudes and their role in behavior can help society be more conscientious about the norms and conditioning inadvertently affecting individual attitudes and behavior.

## July 28, 2021 - 2:20 PM PDT Breakout 5: Sociology and Public Affairs Panel H

NELLI KISLIUK

University at Buffalo

*The Association Between Food and Water Insecurity and Gender-Based Violence*

One in three women globally have experienced intimate partner violence (IPV) in their lifetime (Devries et al., 2013). There is limited evidence to date that food insecurity is a risk for IPV (Hatcher & Mazars, 2021), but no quantitative evidence exists on the link between water insecurity and IPV. In the current study, we examine whether women and men in households facing water insecurity have a higher risk of experiencing IPV. We hypothesize that water insecurity could increase the risk of IPV through increased stress. This study uses one round of data from a cluster randomized controlled trial design (n=130 communities) conducted 2017-2021 in the Mbeya and Iringa regions of Tanzania. The sample comprises 977 male and female adolescents and youth aged 14 to 19 years at baseline (currently 18 to 23 years). We conduct bivariate and multivariate analyses to examine the association between water insecurity (measured by the Household Water Insecurity Scale Experiences) and emotional, physical, and sexual violence experiences (measured by the Conflict Tactics Scale). We find that being water insecure significantly contributes to the risk of IPV. Results suggest that efforts to reduce IPV should focus on upstream determinants of IPV such as poverty and water insecurity.

MALAYSIA MCGINNIS

University of Maryland Baltimore County

*An analysis of Black Women's Health Geographies resulting from the War on Drugs*

The overall effect that we have found is the pathologization and criminalization of black women, even in critical stages of childhood development. This is due to what is found by Black geographies to be aspatiality, carceral geographies and mobility studies to be routine surveillance and over policing in recovery processes, and even in classrooms, and by social ecology & feminist theory to be the result of their oppression. The way to combat these issues and improve the health outcomes of Black women is through empowerment theory, social ecology, and the feminist model of therapy. These tools amongst others would drastically improve the connection of Black women to their communities, and would hopefully lead to less stressors and pressures being placed onto Black women. With these three factors, it can be assured that Black women would be empowered, understood contextually, as well as from a feminist lens.

CARLA ARANCIBIA

Westminster College

*Assessing the perception of domestic violence during the COVID-19 pandemic, barriers to receiving aid, and experiences with domestic violence advocacy organizations among undocumented women living in Utah*

Undocumented monolingual Spanish speaking women are at higher risk for contracting COVID-19 (Olivieri, 2009; Rodriguez-Diaz et al., 2020). In addition to the increased risk of COVID-19 infections and deaths, for many undocumented women, their homes are not a safe environment, and stay-at home orders may have resulted in increased incidents of domestic violence (Cone, 2020; Landis 2020). The purpose of this study is to explore the ways in which COVID-19 exacerbated domestic violence situations for undocumented women in Utah. This qualitative study assesses the interviews of 5-10 undocumented women living in Utah who have experienced domestic violence during the COVID-19 pandemic. Interview questions will be formed through the framework of the Health Belief Model, utilizing the constructs perceived susceptibility and perceived severity (perceived threat), perceived barriers, perceived benefits, and cues to action. We hypothesize that individuals will report negative emotions, more perceived stress and vulnerability due to lowered social interaction opportunities. This study is important for understanding the perception of domestic violence during the COVID-19 pandemic among undocumented women, their barriers to receiving aid, and experiences with domestic violence advocacy organizations. As researchers and public health advocates we hope to develop a conceptual care framework that can provide insight to the rest of the United States as to how to ensure that the rights and autonomy of women and girls who are undocumented are not further violated.

## July 29, 2021 - 8:00 AM PDT Breakout 6: Anthropology, Gender, and Ethnic Studies Panel A

CYNTHIA RAY

California State University, Long Beach

[\*The Impact of COVID-19 on Latinx Children and Families: A Review of the Literature\*](#)

During the COVID-19 pandemic, Latinx immigrants in the U.S. have been disproportionately impacted by high rates of COVID infection, mortality rates, loss of employment, and reduced access to public benefits. Shifts in immigration policies and a rise in anti-immigrant sentiment during the past two decades have placed Latinx immigrants at risk of experiencing mental and physical health challenges during the pandemic. Children of immigrant families who are experiencing these stressors may be at greater risk of experiencing depression, anxiety, and or fear of family separation due to fear of family separation due to immigration enforcement. Therefore, it is important to examine how parental stressors have impacted Latinx immigrant family well-being during the pandemic so that we can better meet their social service needs. This study reviews relevant literature on the impact of mental and physical health, and economic wellness on Latinx immigrant youth and families during the pandemic from 2020-2021. Overall, these studies show that Latinx youth and families have been negatively impacted by restrictive immigration enforcement policies coupled with high rates of COVID-19, which have resulted in economic job loss, and compounded stressors which have resulted in increased rates of anxiety, and depression among both youth and adults. These findings have implications for both social work practice and policy, suggesting that culturally competent service provision and interventions are needed to aid in the pandemic recovery of Latinx immigrant families.

KIMBERLY GUZMÁN

St. Edward's University

[\*Minority Health: The Disproportionate Impact of COVID-19 on Racial and Ethnic Minority Groups\*](#)

The COVID-19 Pandemic has revealed social and racial inequalities in public health across the globe. The purpose of this study is to investigate how said inequalities have impacted the health equity of racial and ethnic minority groups, particularly focusing on the health disparities and barriers certain groups might face in comparison to others. This includes covering minority health, vaccine equity, vaccine hesitancy, and factors that have disproportionately impacted racial and ethnic minority groups during the COVID-19 pandemic. These factors will help analyze how social and health inequities affect access to health care services and to COVID-19 vaccines. This study was conducted using secondary sources to gather data on minority health, the overrepresentation of vulnerable populations among COVID-19 cases, and vaccination rates for these populations.

MARIA OCHOA

The University of Arizona

[\*Beyond Language Barriers: Intruding factors in Healthcare Accessibility for Mexican Immigrants\*](#)

Mexican immigrants face many barriers in their attempt to access healthcare in the United States. While language barriers are one of the most well-known issues, Mexicans in the US face many other obstacles, including the financial burden of care, lack of health insurance, difficulties navigating healthcare systems, and lack of pre-migration access to health care. While some of these barriers are well documented in the literature, others, such as the impact of pre-migration factors, remain poorly understood. The purpose of the current study is to address a fuller range of barriers faced by Mexican immigrants in the US by exploring immigrants' pre-migration access to medical care, health experiences, and knowledge of medical systems to determine whether such factors impact immigrants care-seeking practices once in the US. Specifically, this quantitative research project will include conducting surveys with 300 Mexican origins, foreign-born participants drawn from the sample of a previous study focussing on liver disease in southern Arizona. In collaboration with University of Arizona researchers who specialize in Latino immigrant health, I worked to create and finalize a survey instrument aimed to document the relationship between pre and post-migration care access, define the methodology for the proposed project, and submit a full Institutional Review Board application in order to prepare for data gathering in Fall 2021. Given the strong correlation between barriers to healthcare access and utilization and overall well-being, this research is designed to inform interventions that decrease the difficulties Mexican immigrants face in accessing healthcare and thereby improve overall health.

## July 29, 2021 - 8:00 AM PDT Breakout 6: Biology Panel B

ALEXA GUERRERO

University of California, Davis

[\*Linking the Foraging and Breeding Behaviors in Lekking Species\*](#)

It's well established that breeding and foraging behaviors depend on individual decisions, but little is known about how decisions are connected across contexts. To improve conservation efforts of wild species and critical habitat, it's essential to understand how animal decisions of foraging and breeding are linked. The current research focuses on breeding behavior in the Greater sage-grouse, a lekking bird that feeds exclusively on chemically-defended sagebrush during the breeding season. Male sage-grouse display for several hours each morning on a lek (display ground) during the breeding season and forage on toxic sagebrush in the afternoons. We will be connecting the individual decisions on and off-lek and how they influence off-lek foraging behavior to the on-lek breeding behavior, which are essential to male survival and reproductive success that incur high physiological costs. Using videos taken on leks during the breeding season, I will quantify male breeding behavior by recording successful copulations, aggression display rates, and male-male aggressive interactions. This breeding behavior data will be paired with chemical foraging data collected from GPS-tagged males. Linking foraging and breeding behaviors in sage-grouse will allow researchers and managers to understand how habitat quality affects reproductive success and, more broadly, population processes in other herbivores.

LUCY WEYER

<p>Knox College</p>

[\*Effects of UV radiation on Hypsibius Exemplaris Tardigrade embryos in different stages of development\*](#)

<p>Tardigrades, small aquatic invertebrates known for their tolerance to high doses of radiation, have been at the forefront of space research and astrobiology in the last decade. Recent studies have explored the ability of tardigrade adults to withstand gamma radiation, UV radiation, and ionizing radiation. Several studies have researched tardigrade tolerance to gamma radiation during different stages of embryonic development; however, no studies have performed these experiments with UV radiation. In this study, UV radiation tolerance in different stages of embryonic development in the tardigrade species Hypsibius exemplaris will be investigated. The measurement of tolerance will be determined by hatchability, life span, and fertility after UV radiation exposure. We predict that the embryos exposed in earlier stages of development will display higher levels of damage than the middle and late stages of development. Understanding the impact of radiation during tardigrade embryogenesis can provide insight into the developmental timeline of DNA repair mechanisms.</p>

JOANA HERNANDEZ

University of Maryland Baltimore County

[\*Assessing the Function of Human Amyloid Precursor Protein and Its Fly Homolog APP-Like in Drosophila\*](#)

Alzheimer's disease (AD) is a neurodegenerative disease that eventually leads to a loss of basic human brain function. The disease manifests itself through the destruction of nerve cells. The amyloid beta fragment (A $\beta$ 42) that results from the cleavage of the amyloid precursor protein (APP), forms plaques in the brain which causes cell death. The fruit fly *Drosophila melanogaster* has a protein APP-like (APPL) that shares a high degree of conservation to human APP. Therefore, we plan to use powerful genetic tools and tractable neuroanatomy available in *Drosophila* to study human APP and its homolog APPL. We will test APPL mutants, as well as flies expressing transgenes of different variants of APPL and human APP. A flight behavioral assay will be used to analyze the effects of the expression of the different transgenes in flies that are 2 days (2d), 10 days (10d), and 30 days old (30d). To test the flies, a drop test will be conducted which consists of dropping flies in a graduated cylinder and recording their landing distance. The measured flight performance will be a reading of the function of the motor network including identified flight motoneurons. The observations that will be recorded will help provide better understanding of the function of APP and APPL.



## July 29, 2021 - 8:00 AM PDT Breakout 6: Engineering Panel C

DANIEL CANSECO-CHAVEZ

California State University, San Marcos

[\*Demonstration of Creating Planar Inductor Components Using Copper Tape\*](#)

In the introductory physics curriculum, induction is taught by describing the behavior of coils and solenoids. It is then natural to introduce inductance by having students imagine what happens when a solenoid is part of an electrical circuit. However, it is perhaps useful to ask students early on, "How could you build a micro-scale inductor?" In industry, micro-and nanoelectronics are constructed using various thin film deposition and lithography techniques, and an inductor can be created simply by depositing a metallic film of copper etched into the shape of a spiral [2]. These planar inductors are core components for high-frequency antennae [ref] and can be realized by students in a hands-on way without the need for the expensive equipment that resides in a cleanroom. All the instructor needs are some paper, copper tape, and solder.

JAMIE GUIDO

The University of Arizona

[\*Comparison of State of the Art End-to-End and Disambiguation-Only Approaches to Entity Linking\*](#)

Entity linking is an uncommon term but is relevant to daily life for many people. Entity linking is the process of using recognizable real-world objects, or named entities, in text and linking them to a corresponding entry in a database with more information, such as Wikidata. This can be used for other machine learning techniques such as text retrieval, which is most associated with search engine queries. The two main approaches to entity linking are end-to-end and disambiguation-only approaches. End-to-end is a two-step process involving finding the named entities through Named Entity Recognition and disambiguating those entities to a database. Disambiguation-only takes gold-standard entities which have been manually selected and only disambiguates them from a database like the name suggests. Previous research has recognized that disambiguation-only technique is more accurate than end-to-end, however any model that involves manual manipulation is not ideal. Therefore, this research will compare both models with the use of the revolutionary transformer model for the process of Named Entity Recognition in the end-to-end model and determine if the model's efficiency can improve the end-to-end approach. For the purposes of this research, the models will use a novel knowledge base for entity recognition and the Wikidata database will be used. Accuracy will be determined using InKb F1 scores and the end-to-end model will be processed through a General Entity Annotator Benchmark.

ALEXANDER PEREZ DE LEON

University of California, San Diego

[\*Quasi-2D Perovskite Light Emitting Diodes\*](#)

Organometal halide perovskites have demonstrated optoelectronic properties which make them a promising potential emission layer in charge separating devices such as light-emitting diodes (LEDs). Excellent charge carrier mobilities and low exciton binding energies are factors that contribute to low non-radiative recombination rates, which is imperative for efficient LED operation. Additionally, high crystallinity and low defect density bolster perovskite's efficiencies as a light-emitting material. In order to further outperform trapping and the forthcoming non-radiative recombination, quasi-2D perovskites can be used to incentivize additional radiative recombination. Here we report a method for 2D/Quasi-2D layered perovskite light-emitting diodes.

RACHEL LUU

University of California, San Diego

*Bioinspired Models of Horse Hooves*

Biological materials present an abundance of structures that can serve as an inspiration for designs of new synthetic materials for various technological applications. In particular, the horse hoof yields outstanding mechanical properties with excellent fracture control mechanisms. Thus, the hoof was studied for inspiration in designing high impact resistant, compressive, and tensile strength materials. The horse hoof structure consists of a hierarchical assembly of helical, layered, tubular and cellular microstructures. In order to deepen our fundamental understanding of these microstructures, we identified the most prominent structures through prior research into the hoof's energy absorbent properties. Then, numerous models were designed with varying metrics of the structures such as tubule reinforcement and tubule shape, size, and density gradients. Models were fabricated using multi-material additive manufacturing and their characterization provided a comprehensive understanding of how tubular and gradient features affect fracture. The bioinspired models were tested using drop tower, compact tension, and hopkinson bar, exhibiting behavior similar to the observed phenomena in the hoof. Findings regarding these bioinspired models provide insight into the complexity of the hoof structure and offer guidance for future bioinspired technology. This work was supported by the National Science Foundation Mechanics of Materials and Structures Program (Grant Numbers 1926353 and 1926361).

## July 29, 2021 - 8:00 AM PDT Breakout 6: Math, Stats, and Physics Panel D

SEBASTIAN FIGUEROA

University of California, Los Angeles

[\*Derivation of Plasma Density from New Hardware Applications of Microwave Interferometry\*](#)

Interferometry is a well-established technique in the field of plasma diagnostics for obtaining measurements of plasma density. However, the most prevalent equipment available to implement such approaches is highly specialized and costly. This project intends to demonstrate that comparatively basic and economical radar equipment can be equipped to perform interferometry on plasma for diagnostic purposes. The main resources are a radar emitting/receiving board, a data capture card, and their associated software. Methodologically, this research entails the manipulation of the radar and data parameters to accurately measure the phase shift induced by the plasma in question; subsequent processing and analysis of that information will yield the relevant density measurements. The main sources directing this work are the existing theoretical precedents for interferometry, as they will guide the experimental work of employing new hardware methods. This project is in progress, and its future steps are concerned with mastering the operation of the hardware and software and applying the configuration to actual plasma. Developing a methodology using this specific equipment will establish a salient precedent for less specialized hardware applications of plasma interferometry that can be implemented in a variety of similarly basic equipment. As such, this research has important implications for the accessibility of diagnostic methods across the field of plasma physics, an important discipline for future prospects in nuclear power.

EMILY LOPEZ

University of California, Santa Barbara

[\*Opening the Black Box: A Comparison of Linearized Optimal Transport and the 2-Wasserstein Distance\*](#)

Optimal Transport Theory is a branch of mathematics that seeks the most efficient way of transporting one distribution of mass to another location. A question originally posed in the 1700s as a means of optimally allocating resources, Optimal Transport has regained traction for its ability to compare images by quantifying both texture and shape information, proving useful in the settings of economics, data science, and particle physics. A downside to Optimal Transport, however, is that it requires all pairwise 2-Wasserstein distances between images to be computed, which is computationally costly, and for large scale image processing, cannot be done on a personal computer. Wang et al. (2013) proposed a new approximation scheme called Linear Optimal Transport (LOT) that uses a linearized approximation of the 2-Wasserstein distance that is computationally faster than standard Optimal Transport without sacrificing its classification capabilities. What remains unknown is if there are any similarities or differences between the LOT and the 2-Wasserstein distances. In this talk, I will present new results that gives a comparison of the two distances that may justify some of the properties of the LOT approximation scheme.

CORDELIA LATHAM

Westminster College

[\*Using Robotic Telescopes to Estimate Distances to RR Lyraes\*](#)

Cepheid variable stars have been used as “standard candles” to find distances to other stars. The fluctuation of brightness in variable stars can help identify their distance by comparing the observed (apparent) luminosity (or brightness) to the true (absolute) luminosity as determined by a relationship between the period of the fluctuation and the absolute luminosity of the star (called the period-luminosity relationship). Stars that have shorter periods with a lower luminosity than Cepheid variables, can be classified as RR Lyrae stars. We observed the brightness of an RR Lyrae star over time using the robotic telescopes of Las Cumbres Observatory to determine its period and apparent luminosity. We used that information and theoretical period-luminosity relationships for RR Lyrae stars to determine the distance. We will compare the distance to that found by the GAIA; satellite using stellar parallax; if the distances are not the same within experimental error, then the theoretical RR Lyrae period-luminosity relationships may be inaccurate.

## July 29, 2021 - 8:00 AM PDT Breakout 6: MIMG Panel E

MICHAELA WERNER

Purdue University Northwest

[\*Determining Effect of Cartridge Case Coatings on Gunshot Residue in Firearm Investigations\*](#)

Crimes involving firearms are broad in the U.S and is critical that law enforcement and investigators can identify evidence that advances criminal investigations by identifying the person(s) of interest. Spent cartridge cases are not regularly submitted for DNA testing, and our ability to consistently limit metallic and gunshot residue (GSR) in said cases has not been successful to date. GSR is deposited on hands, clothes, and weapon(s) from the person discharging the firearm and is composed of primer and propellant fragments. An improvement in the ability to limit the persistence of inhibitory compounds would increase the success rate by which DNA typing would be employed in forensic investigations involving spent cartridge cases. Ammunition regularly contains a lead-based priming mixture—a critical component of GSR. These residues have demonstrated to result in concentration-dependent inhibition of PCR-based DNA typing STRs. However, due to chemical changes in the manufacturing of commercial cartridge cases, it is harder to recognize which inhibitory compounds are in lead-free primers (LFPs). In the current study, we seek to study the effects of LFP ammunition on our ability to detect 1) inhibitory compounds from commercial ammunition; 2) assess the impact of metallic cartridge cases; and 3) assess the impact of firearm metal/coatings in the presence of common LFP residues. By providing more about the priming compound and the cartridge case composition, we hope to identify new methods which will improve DNA typing success in firearm investigations.

RENZO VIZARRETA

Rochester Institute of Technology

[\*Modeling of Phase Separation in Bacterial Cytoplasm\*](#)

Phase separation inside bacterial cytoplasm has gained interest in the soft matter community over the last decades, where experimental evidence shows the existence of membrane-less bound compartments in eukaryotic cells driven by liquid-liquid phase separation. New research suggests that a similar mechanism may apply for bacterial DNA within the cytoplasm, showing liquid-crystal-like properties. Despite decades of attempts, a complete understanding of the collective dynamics and self-organization between intracellular components in bacteria is still a work in progress. In this research, we conjecture that DNA condensates inside bacteria behave as an active matter liquid-crystal showing local orientational order, phase separating from the passive components in bacterial cytoplasm. To test this conjecture, we built a particulate model of bacterial DNA condensates using Brownian Dynamics simulations to study a bi-mixture of Active Brownian Particles (ABP) and passive particles of the same size, but with different mechano-adhesive contact interactions and self-propulsion speeds. Our results capture the behavior and structure of a phase-separated system, with the presence of time-evolving topological defects showing local orientational order.

LORETTA NOTAH

The University of Arizona

[\*Analyzing Clostridium difficile Treatment Therapies\*](#)

Clostridium (Clostridioides) difficile is the leading cause, globally, of a nosocomial- antibiotic associated diarrhea, known as Clostridium difficile infection (CDI). Asymptomatic colonization is very common in many community settings, such as healthcare facilities, adult care homes, and infants. Conventional CDI therapy requires antibiotic treatment, utilizing vancomycin or metronidazole, and sometimes fidaxomicin. However, due to the progressive impact of these antibiotics on the gastrointestinal tract, CDI infected individuals are likely to disrupt natural gut microbiota. The results from overuse of antibiotics have been found to be a risk factor in the progression for a CDI infection, by reducing microbial diversity and species richness. Other methods of CDI treatment include a more direct approach in changing a patient's intestinal microbiota via fecal microbiota transplantation. This innovative treatment is currently being investigated for efficacy, however, there are significant risks when obtaining donor stool and during administration. Subsequently, a microbiota-targeted therapy was recently introduced utilizing modified bacteriocins to neutralize C. difficile toxins (TcdA and TcdB) during ongoing infection. This study aims to analyze the efficacy of these Clostridium difficile infection therapies and determine a cost-benefit analysis from a patient's standpoint. While all of these treatment options are effective, further studies are necessary to understand the progression of C. difficile from colonization to infection.

KAYLA MEDINA

University of Colorado, Denver

*Detecting and Identifying Structural variants in genomic region associated with Prader-Willi Syndrome and Autism + Down Syndrome*

Prader-Willi Syndrome (PWS) is a rare genetic disorder that causes many complications in individuals who have this disease. Currently, there is evidence to support the role of genes located in a particular region of chromosome 15 (15q11-q13) in the etiology of PWS. However, the exact mechanisms for causality and phenotypic variability haven't been identified, and the specific genes involved and their role in the development of the various symptoms of PWS are being characterized but not yet known. One potential mechanism underlying PWS and the variability in phenotypes observed in the presence of structural variants in the genomic region within the 15q11-q13 region of the genome. Prior to exploring this mechanism, we will recruit individuals with PWS to analyze the genomic DNA using technologies like optical mapping with Bionano Genomics which allows the analysis of long DNA molecules to detect structural variations. We will also use optical mapping data (from Bionano Genomics) in another research project which involves analysis of individuals who have Autism +Down Syndrome. We hope to identify differences in the structural variants within these individuals compared to individuals with Down syndrome without autism, individuals with autism only (No Down Syndrome), and controls without either Down syndrome or autism. In the long term, we hope this approach will identify genomic differences specific to individual patients which may help predict risk and improve personalized treatment and management for some associated signs and symptoms in PWS and those who have Autism + Down syndrome.

## July 29, 2021 - 8:00 AM PDT Breakout 6: Psychology and Cognitive Science Panel F

VANESSA MUÑIZ

Baylor University

[Feasibility of the Elkins Hypnotizability Scale - Spanish Version](#)

Hypnosis is used in the medical field as an alternative treatment option to alleviate symptoms and conditions that may affect the patient's quality of life. Extensive research has found that patients' ability to be hypnotized is different in every individual and knowing patients' hypnotizability levels aid in improving treatment plans. The Elkins Hypnotizability Scale (EHS) is a standardized scale that measures individual differences in hypnotizability; however, despite its role in clinical care, there is a lack of hypnotizability scales available to patients that identify as Spanish-only speakers. This suggests disproportional accessibility to the EHS and a scarcity of efficient, personalized hypnotherapy to a more diverse population. This study observed the feasibility of a Spanish translation of the EHS in Spanish-speaking communities. The EHS' Spanish version will be administered to approximately 10 participants. Their hypnotizability levels will be measured, and post-assessment questionnaires will be used to evaluate the scale's level of pleasantness and comprehension level. Other factors that may affect the feasibility of a Spanish EHS translation, such as possible cultural biases and recruitment outcomes, are also analyzed in the study. The results of this study should be similar to those found with the English EHS; however, this study will identify possible confounding variables such as cultural and linguistic differences. By translating the EHS in Spanish and conducting this feasibility study, this study aims to open the door to future research in hypnosis with more diverse samples that can accurately represent a more globalized population.

HALA ALKHATIB

University of California, Davis

[Relationships Between Parental Warmth, Parental Responsivity, and Child Language Outcomes in Children with Fragile X Syndrome](#)

Fragile X syndrome (FXS) is the leading inherited cause of intellectual disability. Male children with FXS often present with co-occurring autism spectrum disorder, language delays, and behavioral challenges. Participants in the current study are male children with FXS (ages 3-7 years) and their fathers and biological mothers. We were interested in investigating relationships between parental responsivity and child language during parent-child play interactions (PCI), as well as potential differences in these relationships based on parent sex. Parental responsivity refers to parental behaviors that follow the child's focus of attention and encourage communication. Evidence shows that greater parental responsivity supports more optimal language development in both typical children and those with language delays. Preliminary data show that mothers used an average of 82 responsive behaviors (SD = 38) during mother-child interactions, whereas fathers used an average of 77 responsive behaviors (SD = 33) during father-child interactions. The children produced an average of 110 utterances (SD = 64) during the mother-child interactions and an average of 133 utterances (SD = 67) during father-child interactions. However, further investigation is needed to determine which specific parental behaviors have the largest influence on child language and whether there are differences in these relationships based on parent sex. In future analyses, we will explore parent sex-related differences in relation to other parent and child variables, including parental warmth and criticism. Investigating these relationships will lead to interventions aimed at improving parental emotions and behavior and child language.

ISAIAS CEBALLOS III

University of California, Davis

*"Did They Just Say That?!" Investigating Processing of Racialized Adjectives in the Context of Sentences.*

Have you ever felt uncomfortable hearing President Obama referred to as "articulate"? This is an example of racially coded language- which can be subtle. This project investigates how racialized adjectives affect language processing speed. We will administer a survey in which we ask subjects to list adjectives that they find offensive. Following the survey, we will conduct two rating studies. The first study will ask participants to rate on a Likert scale how offensive they believe an adjective to be, and the second rating study will ask participants to rate adjectives based on how related to race/ethnicity they interpret the adjectives to be. We will use the responses that receive ratings in the middle of the scale to examine how covert linguistic microaggressions affect processing speed in a self-paced reading study- in which participants read sentences word-by-word. The reading study is designed to compare sentences with and without racialized adjectives and where the referent does or does not match the intended covert microaggression (e.g., articulate Barack Obama vs articulate Bill Clinton). We predict that sentences containing a match between the intended referent and the racialized adjective will be processed faster because there is a match of stereotyped expectations that leads to semantic agreement. This work will allow us to identify the effects of racialized language on real-time language processing.

## July 29, 2021 - 8:00 AM PDT Breakout 6: Psychology and Cognitive Science Panel G

JAQUELINE MARTINEZ  
University of Nevada, Reno

[\*Mexican and Mexican American Women: How their Racialized Ethnicity and Gender Influence views on Mental Health\*](#)

This research focuses on Mexican and Mexican American women's identity and how their gender and ethnicity influence their own perceptions about mental health. Studies have indicated that the stigma surrounding mental illness is greater for ethnic communities. However, of the research present, there are hardly any in-depth interviews conducted in understanding what roles racialized ethnicity and gender play in shaping Mexican American women's perception on mental health. How are the attitudes of mental health created and influenced by various factors of identity? For women of Mexican ancestry, it is important to understand how the roles of ethnicity and gender influence their perceptions of mental health because these social factors can create real and lasting barriers to receiving mental health care that otherwise go unrecognized. To achieve a fuller understanding of how social identities influence perceptions on mental health, in-depth interviews with Mexican American women will be conducted.

JAYDA NEWMAN  
University of Wisconsin, Oshkosh

[\*Misunderstanding the Mind: The History and Prospects of Treating Mental Illness\*](#)

This paper provides a historical analysis of mental health diagnoses and treatments through the perspective of philosophy of mind. This will be accomplished by use of a systematic review of previously published books and scholarly articles. The paper will trace various treatments, starting from ancient civilizations and ending with modern treatment types, which will then be correlated to the two overarching categories in philosophy of mind, Dualism and Physicalism. The intention of this paper is to create a better understanding of how the individuals who developed treatments for mental disorders perceived the mind and its interaction with the body. I will be asking, specifically, what Mind/Body interaction is assumed by the development of each treatment. The analysis of these assumptions raises an important question regarding the status of current mental health treatments, which will be addressed at the end of this paper by discussing just how likely it is that the contemporary treatment approaches are not any less mistaken than treatments from the past.

SKYE TAYLOR  
Wayne State University

[\*Mental Health States of BUILD Scholars\*](#)

During these trying times of the COVID-19 pandemic mental health among the country has been perceived to be declining. COVID-19 has revealed how important understanding mental health is and gives us a chance to analyze the effects of stress on the mind. Even those with stable living have been mentally uprooted. I focused on studying the mental health of BUILD students who participated in the BUILD Research Collaboratory (BRC). The question that I studied along with Justin Carthage and Willow Weibel was, "How has the psychological stress of COVID-19 affected BUILD Scholars?". We chose this topic because We are all passionate about addressing the century old stigmas of mental health. As psychology and neuroscience majors we understand the history of mental health, and it's ever evolving status in the world. We hypothesized that African American BUILD Scholars are more affected by the stresses of COVID-19. It is a fact that COVID-19 pandemic has disproportionately impacted POC, especially black POC. This is due to underlying racial disparities that are still being perpetuated in society today.



## July 29, 2021 - 8:00 AM PDT Breakout 6: Sociology and Public Affairs Panel H

KATRINA SEALS

Eastern Michigan University

[\*Examining News Coverage of the Breonna Taylor Killing through Framing Theory\*](#)

Over the past decade media outlets have been the main sources for most people to stay informed on local and world-wide news. The manner in which information is presented correlates with public reaction to the events. This paper uses framing theory to analyze how media outlets reported events surrounding the killing of Breonna Taylor on March 13, 2020 in Louisville, Kentucky. This project examined over 100 headlines taken from CNN, ABC News, MSNBC News, and Fox News.

JESSIKA VIVEROS

University of California, Los Angeles

[\*Racialized Policing: The Role of the Qualified Immunity Doctrine in the Process of Accountability\*](#)

This project will address: To what extent does qualified immunity hinder the process of holding police accountable for their actions amongst our black community, and how does it, in turn, add to racially motivated policing? Taking into consideration the historical roots in which qualified immunity derived, to what degree is this doctrine maintaining white supremacy at an institutional and systemic level? Qualified immunity is a legal doctrine that grants government officials performing discretionary functions immunity from civil suits unless the plaintiff shows that the official violated "clearly established statutory or constitutional rights of which a reasonable person would have known." Black Critical Theory (BlackCrit) and an afro-pessimism historical approach will be applied to examine the historical roots of the qualified immunity doctrine. These empirical approaches will be utilized to analyze the frequency with which appellate cases were granted or denied immunity. Furthermore, utilizing qualitative methods of semi-structured interviews and an analysis of public statements, this study will examine the voices of key interest groups like that of the American Civil Liberties Union (ACLU), police unions, and Black Lives Matter (BLM). The expected findings will contribute to the scholarship regarding the movement of abolishing the qualified immunity doctrine.

GILBERT MURILLO

University of California, Santa Barbara

[\*From California Prison to Policy Work: How Incarceration Has Led to Activism?\*](#)

Scholars and other social commentators have developed measures and theories regarding the effectiveness of incarceration have been developed, yet little to no research exists on how state police affect incarcerated and FI (formerly incarcerated) people, leading them to activism. Through a series of qualitative information of testimonials, documents, and articles, this study measures participants' perceived attitudes toward policies that result in incarceration, and how that has led to their involvement in current activism work dedicated to overturning the State's ideology. Thus, they examine their experiences and understand their relationships to state policy through a set of theories by Antonio Gramsci, Achille Mbembe, and Oliver Cox. This research argues that these theoretical approaches provide a guide FI people are organic intellectuals because they experience a dominant understanding of prison and state policy, which are now engaged with activism work. The study participants have formerly incarcerated Californians targeted by state policies, recruited through social connections. The participants answered a demographic questionnaire measure: (1) Understanding of State (2) Perceived organic intellectual (3) Perceived state-hegemony within incarceration (4) Clarity and awareness led activism work of counter-hegemony (5) And disrupting the continuation of necro-politics. The results of this study can be used to guide future social equality for formerly incarcerated populations of interest in a way to decrease further criminalization.

SHALEA CARTER

University of Wisconsin, Whitewater

*Police shootings involving African Americans*

This research project examines the effects of police training on police shootings of African Americans. The research question is, are state mandated de-escalation and diversity trainings correlated with lower rates of police shootings of African Americans? The variables measured within this project allowed me to test if state mandated de-escalation and/or diversity training affected the rate of police shootings of African Americans.

The independent variable is state mandated de-escalation and diversity training. The dependent variable is the rate (the increase or decline) of police shootings of African Americans. The rate consists of the number of fatal force shootings using data collected by the Washington Post for the year 2020.

The hypothesis was: states with mandated de-escalation and/or diversity training will have lower rates of police shootings of African Americans than states that do not mandate trainings. I can't accept the null hypothesis because there was a declining effect observed within both training types in comparison with the rate of police shootings involving African Americans in 2020. However, I also can't reject the null hypothesis because of the p-value and what is defined as statistically significant.

I collected data from all 50 states. The states that had the least amount of fatal force reports also had the police training requirement to use de-escalation methods first.

## July 29, 2021 - 9:10 AM PDT Breakout 7: Arts and Multimedia Panel A

ELEGY GARCIA

Our Lady of the Lake University

*Public Perception: Journalism's Effects on Societal Views of Human Trafficking Victims and Resource Availability*

News media can influence the way the public perceives certain issues, like social issues and crimes. Human trafficking is a stigmatized area of criminal justice, and one that is often sensationalized in the news. The way the news frames their own articles and reports on both specific instances of human trafficking and generally relating to the topic can influence the quality and availability of resources for human trafficking victims. Previous research on this topic found that public opinions about human trafficking showed false and narrow beliefs about it due to portrayals and framings of human trafficking. Two national and two local news outlets were sampled and categorized to look for common themes, keywords, and tones to see how they portrayed human trafficking in their articles.

NALANI MOSS

The University of Arizona

*The 'Blacker' Berry: The Bitter Fruits of Black Entertainment via Black Twitter*

Social media has provided a stage for many talented creatives like DC Young Fly and King Bach, who have established a platform and brand in Black Entertainment. Nonetheless, it is apparent that the creative control of Black Entertainment has still been in the hands of major Entertainment corporations and has further transitioned into the globalization of Black Culture through Social Media Applications. Furthermore, mass media has indicated the traction that non African American content creators gain from Black culture references, and the lucrative career they obtain by being able to appeal to their audience. This situation has created a unique market for Black culture, where other races have maintained their interpretations of Black Culture through exploitation. The purpose of this analysis is to identify the trend in American Entertainment that capitalizes on the exploitive marketing of Black Culture. Do Black Culture Content Creators, both African American and Non-African American, obtain higher frequencies of engagement (Retweets and Mentions) via the Subsection of Black Twitter when they utilize exploitative marketing compared to corrective promotion to advertise Black Black Culture? This study serves to further inform the reader of the characterization of Minstrelsy and Blaxploitation entertainment in order to 1) Familiarize the characterization of Black Culture marketing and advertising in Social Media 2) Gauge a measurement of engagement that Black Culture Content Creators obtain from derogatory versus corrective promotion of Black Culture 3) Analyze the potential of a networking ecosystem of Black-Owned content creators, production and administration businesses among the Black Twitter network.

REBECCA DINGLE

University at Buffalo

*Transnational Phenomena in Television: Learning From South Korean Television Dramas and the Korean Wave*

South Korean television dramas (K-Dramas) have become a popular form of entertainment across the globe. This phenomenon is known as Hallyu, or the Korean Wave. This study examines K-Dramas that became popular in India, Japan, and the United States. For example, Winter Sonata became highly popular in Japan, especially with middle-aged housewives who greatly enjoyed the male lead. The drama involves high school sweethearts that are separated and later reunited. Why are Winter Sonata and numerous other K-Dramas so popular not only in Japan, but in other countries as well?

This study examines the question of how K-Dramas become popular in other countries using comparative methods. Through a media studies lens, it will examine plot elements, themes, actors, etc. to help identify what elements led to its popularity and be compared to find relevant factors. They will also be compared to the respective country's cultural practices to help illuminate the connections across borders.

For future research, this study can be expanded to examine more dramas in each country while including more countries. The research on K-Dramas and the widespread popularity of foreign content is relatively nascent, so this study aims to illuminate what makes a transnational phenomenon like Hallyu possible.

JORDYN FUGGINS

University of California, Santa Barbara

*How Media Portrayals of Black Transgender Women Have Impacted Public Opinion*

This research project explores how Black transgender women are portrayed in films and television series. Using an intersectional lens to understand the relationship between transness, race, and gender, I examine how popular media representations of transness and Blackness during the 1950s-1980s impacted how the public perceived, treated, and interacted with Black transgender women. I analyze media from the 1950s-1980s because the Gay Liberation Movement took place during a portion of this timeframe, and I want to look at how Black transgender women were represented in the media during the Gay Liberation Movement as well as the periods slightly before and slightly after this movement. Having my research timeframe expanded in this way will allow me to understand how portrayals of Black transgender women changed or remained the same as the struggle for gay rights began coming to fruition. I argue it is necessary to taxonomize and examine these portrayals, given the role popular media plays in informing public opinion and constructing narratives about minoritized populations. Often, the controlling images produced by television shows and films offer specific versions of reality that align with the personal beliefs and values of its producers. Thus, this project analyzes the controlling images of Black transgender women in films and television series to demonstrate how popular media constructs racialized transgender subjects.

## July 29, 2021 - 9:10 AM PDT Breakout 7: Communication, Economics, and Geography Panel B

NATALIE ALMONACID

Boston College

[\*From Nation-Wide Shutdowns to Bans on Travel: the Impact of a Government's COVID-19 Policy on its Economic Growth\*](#)

The spread of COVID-19 created enduring problems and consequences for the global economy. The pandemic impacted every nation's economic growth, evident in the preliminary data recorded by researchers. Although this phenomenon has affected nearly every economy, one thing that differs between nation's is their response to the pandemic. Each nation implemented different containment strategies and non-price interventions in an attempt to reduce the ramifications of COVID-19. This paper conducts a statistical analysis to investigate how different government COVID-19 responses impact gross domestic product per capita as well as determine the overall effect of specific policies on economic growth. This research aims to find out which non-price interventions have the smallest effect on a country's economy and also provide recommendations to policymakers on what type of response should be adopted in the instances of potential future health crises.

VICTORIA HERNANDEZ

St. Edward's University

[\*Consumption During The Pandemic\*](#)

While there has been plenty of attention given to conspicuous consumption, there has not been much research done from a different perspective beyond the materialistic status symbols that come along with conspicuous consumption, in this case, the COVID-19 vaccine. This research looks at the relationship between conspicuous consumption, education attainment and early access to the COVID-19 vaccine. According to the online survey conducted, consumers who scored above average in conspicuous consumption and higher than average in education attainment pursued earlier access to the vaccine. However, it is noteworthy to consider that there is an interaction effect between conspicuous consumption and educational attainment. In this instance, it is possible that healthcare access--in particular the COVID-19 vaccine--can be used as a status symbol for those who are highly educated. This research has implications for a further understanding of conspicuous consumption beyond the traditional sense.

BLAINE GEBREHIWOT

St. Lawrence University

[\*The Impact of the Rising Gig Economy on Workers' Livelihoods and the U.S. Labor Market\*](#)

Technological advancements, in particular the widespread use of sharing apps such as Uber and Lyft, have prompted the rise of the gig economy, which is a labor market characterized by short-term (flexible) employment for people who are unemployed or need more than one occupation. This paper explores how the rise of the gig economy affects workers' livelihoods and the evolution of the U.S. labor market. As the profession has not reached a consensus on the exact classification of gig workers, this paper seeks to provide an in-depth analysis of the two growing segments of freelancers and shared economy workers that saw a significant increase during the COVID19 pandemic. After combining company-specific data from Statista with country-level data from the Bureau of Labor Statistics, our results show that the growth rate of gig workers has been significantly higher than the growth rate of the overall U.S. employment. It is noteworthy that while the size of the U.S. labor force was shrinking, the number of freelancers and sharing economy workers saw an increase during the COVID-19 period. To further discuss the development of the gig economy in the U.S., this paper also presents income and demographic aspects of gig workers. We conclude that the gig economy has become an increasingly important part of the U.S. labor market; especially for those who have been struggling during economic downturns. Lastly, our findings provide clues on the potential direction of the U.S. labor market in the short and long term.

## July 29, 2021 - 9:10 AM PDT Breakout 7: Education Panel C

GIOVANNA URBINA

Purdue University Northwest

*Real Education Woke: LatCrit and the Experiences of Latinx Students*

Latinos are the most undereducated population in the United States (Irizarry, 2017; Paris & Alim, 2017). An analysis of research using a Critical Race Theory and Latino Critical Race Theory (LatCrit) lens, permits educators and scholars to find effective ways to utilize Latinx students' experiential knowledge as the capstone for learning, while centralizing their experiences as a form of pedagogical practices. LatCrit illuminates the intersectionality of Latinx students' multidimensional identities that are all respectively unique, yet interconnected. The intersectionality of racism, classism, as well as gender roles are combined with their individual experiences (Bernal, 2002). The research explores the possibilities of Culturally Sustaining Pedagogy (Paris, 2012) and Culturally Relevant Pedagogy (Ladson-Billings, 2017), through the lens of LatCrit theory to the forefront of more educative practices with Latinx students. It predicts that Latinx students will perform better, have a more cohesive educational experience when schools embrace the cultural practices, experiences, and input of Latinx students. I predict using LatCrit theory as this works the theoretical frame that Latinx students will be academically more successful. The purpose of this research is to provide deeper analysis and examination of how Latinx students learn in public educational settings through the Latino Critical Race Theory lens and evaluating how Latinx students incorporate their culture within the classroom when given permission to do so. This research will allow us to take a theoretical and contextual look into how Latinx education could be modified for the success of Latinx students.

CAESAR GIANNI ACEITUNO

University of California-San Diego

*Bridging the Connectivity Gap: The Impact of Faculty and Institutional Practices on the Academic Success of Latinx Students at UCSD*

In this paper, using testimonials from over 40 in-depth interviews with Latinx students, we argue that the hidden curriculum at UCSD creates barriers to academic success for a growing Latinx population. We argue that these barriers take the form of two main practices: faculty and institutional. Faculty practices that create barriers for Latinx students include a lack of openness or friendliness, as well as an exclusive curriculum that limits student's ability to utilize professors as a resource. An example of faculty creating efforts to overcome this barrier is when they go the extra mile to create a more welcoming environment within their classes and offer more office hours. While these efforts have been present, students still emphasized the need for greater diversity within faculty and curriculum to increase feelings of inclusion. Institutional practices which create barriers for Latinx students include holding expectations of college prep or readiness, exclusion through limits on program availability or resources, and large student to faculty ratios. Examples of Latinx students overcoming this barrier entailed student's use or participation in programs such as CASP, TRIO, and OASIS. In conclusion, as UCSD reaches HSI status, it becomes increasingly necessary to evaluate the level of academic inclusion Latinx students experience. Through evaluating in-depth interviews we found UCSD creates barriers both at the individual faculty level and at the larger institutional level. Overcoming these barriers requires greater investment in faculty diversity and programs which support Latinx student success.

GLENDVA VALENZUELA

University of California, Davis

*Firstborn Latina Daughters: The Obstacles that Come with Learning From Home*

Firstborn daughters in Latinx households traditionally tend to have more responsibilities than their siblings. Early on, they find themselves taking the role of a third parental figure in their homes due to external factors such as culture, gender dynamics, and pressure from their parents. The aim of this study is to investigate the effect that remote learning has on firstborn daughters in Latinx homes. We will interview a dozen girls ages 13-18 who fall into this description, along with a group of students in the same age range who are not firstborn Latinx daughters. We will compare the interviews from both groups to analyze whether culture, gender roles, and birth order affect students' success during a pandemic, in which students are forced to learn from home. Students' success will be measured through self-reported end-of-the-year grades and grade point average. We expect there to be a significant difference in learning experiences from both groups and predict that the group of firstborn daughters will struggle more academically than the comparative group due to the responsibilities and expectations that come with their identity. The findings of this study will serve as implications to better understand the impact of cultural and gendered complexities on firstborn Latina students' success during the SARS-CoV-2 (COVID-19) pandemic.

## July 29, 2021 - 9:10 AM PDT Breakout 7: Engineering Panel D

MARCO MARRUFO

California State University, Long Beach

[\*Deep Learning for Channel Estimation in MIMO Wireless Communication Systems\*](#)

Multiple-input multiple-output (MIMO) wireless communication systems utilize numerous transmit and receive antennas to transmit multiple datapath signals simultaneously by taking advantage of the phenomenon known as multipath propagation, which results in multiple independent MIMO channels. Orthogonal frequency division multiplexing (OFDM) is a popular technique employed to encode data over these MIMO channels. As such, it is important to know the channel state information (CSI) for OFDM which is done by performing channel estimation to model some channel matrix. Here, we introduce an application of deep learning for channel estimation by describing an architecture for a variational autoencoder that is utilized to perform channel estimation on a 2x2 MIMO system and we compare it to other channel estimation techniques, such as least-squares estimation and minimum mean square error (MMSE) estimation. Additionally, a framework is introduced for developing a federated learning scheme for efficient channel estimation for MIMO systems.

CHI NNOKA

University at Buffalo

[\*\\*Redacted for Confidentiality Reasons\\*\*](#)

\*Redacted for Confidentiality Reasons\*

EDWIN CASILDO RIOS

University of Nevada, Reno

[\*Soft Robot Driven by Twisted String Actuators\*](#)

Robotics research has made strides to make robotic arms more maneuverable, lightweight, and cost effective. Fulfilling these objectives in simplest form is a soft robot consisting soft actuators. Soft actuators are lightweight flexible materials that are used for robotic applications. Since this category of robot has a simple design, the components available create limitations to the performance ability of the robot. This makes it challenging to fabricate a design that goes beyond standard procedures. This research examines a soft robot manipulator using twisted string actuators (TSAs). TSAs are a method used to create movements in robots by using a motor to twist and constrict a string to cause motion. TSAs are commonly used mechanics for creating movements but its application to soft robots are finite. This study explores the implementation of TSAs within a soft robotic arm. The soft robot arm limitations will be tested using the TSA to measure its maximum range of motion, bending angle, force of the soft gripper, and number of rotations. The arm gripper will perform on several objects and tip force sensors. Results show that the test model can produce a maximum tip force of about 500 mN and bending angle of 97.4°. Conclusions from this study may be used to further study soft robot mobility and its potential industrial application.



## July 29, 2021 - 9:10 AM PDT Breakout 7: MIMG Panel E

NICHOLAS ARMAS

The University of Arizona

[\*Fatty Acid Elongase 5 in Conversation with the Human Cytomegalovirus\*](#)

The Human Cytomegalovirus (HCMV) is an indiscriminate, human beta-herpesvirus that detrimentally affects the immunocompromised and can lead to harmful congenital effects. Alike other viruses, HCMV hijacks and utilizes the host lipid metabolism through its mechanism of replication. To further understand the role and significance of the host lipid metabolism is to understand the specific enzymes responsible for producing necessary metabolites for virion production. One such family of enzymes would be the fatty acid elongases, and one specific enzyme to be more extensively researched is fatty acid elongase 5. Ultimately, what is being determined is whether or not fatty acid elongase 5 is necessary for HCMV replication. Ideally, HCMV may be dependent on the presence or absence of such an enzyme. However, it is possible that the upregulation or downregulation of fatty acid elongase 5 could be dependent on a variety of other metabolic, or general, cellular conditions. Regardless, the implications from this research will improve, and in some cases redefine, what is already known about HCMV and its relation to the host environment for replication.

ZAMIRA CALDWELL

University at Buffalo

[\*Timing of Birth and the Expression of Genes in Serotonin Signaling\*](#)

The timing of human birth is difficult to predict compared to other species due to evolutionary differences. While the causes of these specific differences have been identified, the data collected on gene expression in the mother and fetus hasn't been synthesized enough to be directly applied to predicting the timing of birth.

This is detrimental because "preterm birth is the leading cause of infant and under 5 year old child mortality worldwide" and without a precise understanding of how gene expression changes throughout pregnancy, we cannot adequately prevent it.

We examined the location and expression of the genes involved in serotonin signaling pathways using the Single Cell Gene Expression Atlas to figure out which cells express serotonin receptors, how this expression changes throughout pregnancy, and how it differs in humans compared to other mammals with placentas.

Understanding where these genes are expressed, in the mother's cells or placental cells, and what their role is during normal pregnancies and those with complications will make it possible to decrease the rates of preterm births and develop ways to treat conditions that lead to increased risk of preterm births.

LESLY CARRASCO

University of Nevada, Reno

[\*Development of a Lateral Flow Immunoassay for the Detection of Ebolavirus Soluble Glycoprotein\*](#)

Ebola virus disease (EVD) is a deadly infectious disease that is caused by ebolaviruses. The 2013-2016 West African outbreak, caused by Zaire ebolavirus, was the deadliest outbreak recorded with 28,616 cases and 11,325 deaths. The virus can be transmitted via direct contact with infected fluids from other people or animal reservoirs. The gold standard to diagnose EVD is reverse transcription-polymerase chain reaction (RT-PCR), however, it can take several days to get a result and it requires specialized equipment and trained personnel. While there is a vaccine available, outbreaks are still occurring. Treatment consists of therapeutic antibodies, but a diagnosis is still beneficial to ensure the appropriate treatment is administered as well as to isolate the patient and prevent further spread. A rapid diagnostic tool would be beneficial to the global burden of EVD. Lateral flow immunoassays (LFI) are rapid point-of-care diagnostic tools that use antibodies to detect a specific biomarker of a disease. Soluble glycoprotein, sGP, is the most abundant protein synthesized from the GP gene and is present during EVD. The goal of this study was to isolate monoclonal antibodies (mAbs) reactive to sGP and develop a LFI prototype to detect sGP in samples. A monoclonal library of seventeen antibodies was established and tested in the LFI format to determine the best pair for detecting recombinant sGP.

STEPHANIE TORRES  
University of Washington

*Investigating the Impact of Maternal Antibodies on the Function of the Neonatal Intestinal Microbiota*

Breast milk is a crucial regulator of host-microbiome interactions in early life. In addition to nutrients, breastmilk contains immunoregulatory elements which likely support homeostatic immune responses to newly acquired gut bacteria. Dr. Koch discovered that maternal antibodies, delivered via breast milk, limit the activation of CD4 T follicular helper (Tfh) cells and germinal center (GC) B cell responses in the gut-associated tissues of neonates. These aberrant, T-dependent immune responses depend on microbial colonization and correlate with the transient accumulation of commensal gut bacteria in the mesenteric lymph nodes of neonates at weaning. Together, these findings indicate that neonates lacking breastmilk antibodies generate dysregulated adaptive immune responses to beneficial gut bacteria. Tfh cells interact with B cells within immune structures called germinal centers, which leads to the formation of high affinity, T cell-dependent (TD) antibodies. Tfh cells and TD antibodies are instrumental to maintaining host-microbe homeostasis. Abnormal increases in microbiota-directed TD immune responses can result in profound changes in the composition of the microbiota and even colitis. Considering that antigen-specific adaptive immune cells and their clonal progeny can persist indefinitely, I propose that the inappropriate activation of neonatal adaptive immune cells by gut bacteria results in durable impairments in intestinal homeostasis. I hypothesize that the elevated mucosal Tfh and GC B cell responses generated in the absence of breastmilk antibodies result in long-lived plasma and memory B cells and fundamentally alter the intestinal microbiota.

## July 29, 2021 - 9:10 AM PDT Breakout 7: Psychology and Cognitive Science Panel F

JULIA LEFRANCOIS

California State Polytechnic University, Pomona

*Embodied Narratives: Bodymind Resistance Through Storytelling*

We live in a world governed by a racist, ableist, cisgender patriarchy. Yet, our world is, and has always been, rich in bodymind diversity and non-binary identities. With each generation, our culture continues the work to dismantle inequitable systems. We get closer to more equal distributions of power and more honest about the problematic foundations from which our sociocultural systems were created. The binary system in which we live is what governs how we educate, manage, and even view our bodyminds. It is the way in which we assign value to communities and social positions and how we apply meaning to the complex intersections of our culture. These systems produce inaccurate and incomplete histories within standardized curriculums, to which we are exposed for most of our education. These narratives are told from structural positions of power that reify and claim ownership of marginalized bodyminds' stories. In doing so, histories are silenced and often erased. The study, *Embodied Narratives: Bodymind Resistance Through Storytelling*, gives voice to the suppressed truths that come from the communities of Women, People of Color, and/or Persons with disabilities. It challenges the inaccurate narratives, implicit racism, and other conditioned beliefs that are deeply embedded into our society. These beliefs are at the core of this study's work of dismantling and redistributing power and access. By collecting ethnographic histories from primary sources, this research centers the stories of forgotten or silenced communities by reclaiming ownership and contributing to this generation's civil rights movement.

ISRAEL AISPURU

The University of Arizona

*"Mastermind" Game Show Project*

Gameshows requiring decision making have been used in multiple studies to further understand the process of decision making. More specifically, response times in game shows have been used to study risk aversion and cognitive processing in humans. Spontaneous eyeblink rates (EBR) have also been used to study cognitive processing in humans. In this study, we are attempting to determine how often participants blink while they are listening to questions, and if there is a correlation between EBR and response times. This study examines episodes of the British game show "Mastermind," where contestants go through a series of time limited rounds in which they attempt to answer as many questions as they can correctly. From viewing multiple episodes, participant behavior—such as listening, answering, and responding to feedback—was categorized alongside blinking. These spontaneous eye blink rates have been found to show dopamine-related cognitive function and shows us that they serve as being a non-invasive indirect marker of the function. By noting these participant behaviors, this study aims to supply neuro- and cognitive scientists with useful information on decision making.

SAMANTHA BROOKER

University at Buffalo

*Taste Driven Behavior: The Effects of Rodent Salivary Proteins on Taste Responding*

Survival is dependent on the nutrition of the organism. The ability to decide which foods are safe for consumption is key, and begins with the taste of a food. Typically, toxic foods emit a bitter taste alerting the consumer that continued ingestion should be avoided, yet bitter taste is also found in nutritional foods (i.e. brussel sprouts). The aim of the current study is to determine if animals are able to differentiate between toxic (i.e. caffeine) and non-toxic (i.e. quinine) compounds that have similar chemical structure and possess a bitter taste. I am measuring unconditioned licking in a brief access (10-second) taste test to choose isointense concentrations of potentially toxic and safe bitter compounds within chemical classes (alkaloids, gallated polyphenols, glycosides, terpenoids). Later our study will ask if changes within salivary proteins, which increase an animal's tolerance and preference of known bitter substances that are safe for consumption, will also increase preference to similar compound substances which are toxic. Understanding how to alter bitter taste perception will have wide reaching health implications, including helping to increase vegetable consumption and pediatric medical compliance.

GAVIN S. DICKAMORE

Westminster College

*Mindfulness and Magic Mushrooms: Analyzing the impact of using psilocybin and mindfulness in the reduction of anxiety and depression symptomology*

Psilocybin, also known as magic mushrooms, is a naturally occurring substance that has been used in celebrations, healing rituals, and religious ceremonies among indigenous communities since as early as the 1500s. Recently, researchers and contemporary communities alike have become interested again in the potential benefits of psilocybin use. Preliminary research on the use of psilocybin to treat psychological disorders suggests that it may help reduce both anxiety and depression symptoms (Goldberg et al., 2020), particularly when in combination with other interventions such as mindfulness practices (Morton et al., 2020). Although, research to date has exclusively focused on its application in clinical settings, thus leaving a gap in research regarding the effectiveness of psilocybin use in daily life outside of formal psychological treatment. This study aims to fulfill that gap by measuring the impact of psilocybin and mindfulness exercises on anxiety and depression symptomology. Sixty participants across three treatment conditions (psilocybin group, mindfulness group, and psilocybin-mindfulness combined group) will be recruited for a 3-month longitudinal study. Data will be collected pre-treatment, weekly during treatment, and at post-treatment to examine the impact of psilocybin consumption and mindfulness exercises on anxiety and depression levels among participants over time. We expect that anxiety and depression symptoms will be significantly reduced in the combined psilocybin-mindfulness group when compared to the psilocybin-only group and mindfulness-only group. Implications of this study include the de-stigmatization of the use of psychedelics as a treatment option for psychiatric disorders, thereby maximizing treatment options for individuals with anxiety and depression.

## July 29, 2021 - 9:10 AM PDT Breakout 7: Psychology and Cognitive Science Panel G

ISIDRO HERNANDEZ

University of California, Davis

*Examining the Co-development of Shyness and Acculturation: Findings from a Longitudinal Study of Mexican-Origin Youth*

Shyness, or inhibition when engaging with unfamiliar others in a social setting, is an important personality trait. (Cheek & Buss, 1981). Culture, and particularly acculturation, which is the process where individuals maintain their culture of origin or adapt to new cultural norms, has been found to relate to the development of shyness (Xu & Krieg, 2014; Gudiño & Lau, 2010). However, limited work examines how acculturation factors, such as English language proficiency and nativity, are associated with the development of shyness in Mexican-origin youth across adolescence.

In this study, I will examine the co-development of shyness and acculturation from age 10 to 16, using a large, longitudinal sample of Mexican-origin youth (N=674). I expect first generation youth with lower English proficiency to have higher levels of shyness. In addition, I expect youth who increase in English proficiency to show greater decreases in shyness. Moreover, I will assess shyness using the Early Adolescent Temperament Questionnaire (Ellis & Rothbart, 2001), and Spanish and English language proficiency using the Hazuda Acculturation and Assimilation Scale (Hazuda et al. 1988). Lastly, I will run a bivariate latent growth curve models to test our predictions and use multi-group models to examine whether gender moderates the associations between acculturation and shyness.

JUAN EDUARDO GARCIA-CARDENAS

University of California, Davis

*The Development of Shyness from Late Childhood to Adolescence: A Longitudinal Study of Mexican-origin Youth*

Shyness, or the tendency to feel awkward, worried, or tense during social encounters, especially with unfamiliar people, is a highly prevalent personality trait. More research is needed to understand the trajectory of shyness, and how varying factors can influence one's shyness over time. The present study will test whether symptoms of anxiety and depression at age 10 predict the developmental trajectory of shyness from age 10 to 16, as well as look into the rank-order stability and mean level change of shyness to detect gender differences in shyness trajectory. We will use data from the California Families Project, a longitudinal study of 674 Mexican origin youth. Shyness will be assessed via the Early Adolescent Temperament Questionnaire (Ellis & Rothbart, 2001) and symptoms of anxiety and depression assessed via the NIMH Diagnostic Interview Schedule for Children-IV (DISC-IV; Schaffer et al., 1993). We will model a latent growth curve for shyness from age 10 to 16 and include symptoms of anxiety and depression at age 10. To examine rank-order stability of shyness, we will calculate Pearson correlations between observed shyness scores at ages 10, 12, 14, and 16. To examine differences in the mean-level trajectory of shyness, we will run multiple group models across genders. We do not have predictions for differences in rank order stability and mean level trajectory of shyness between boys and girls. We predict that the presence of anxiety and depressive symptoms at age 10 will be associated with increases in shyness from age 10 to 16.

YAXCHA MARILES

University of California, Santa Barbara

*[How do Lay Health Workers \(LHWs\) help Latinx Families Overcome Barriers to Succeed in Parent-Child Interaction Therapy \(PCIT\)?](#)*

Low-income minorities experience disparities in mental health services due to societal and cultural variables. Low-income, Latinx families with access to mental health programs such as Parent-Child Interaction Therapy (PCIT) through the CALM Mental Health Agency (Child Abuse Listening and Mediation) have the opportunity to develop the necessary skills to manage a child with behavioral issues. However, obstacles remain that prevent closing the gap on mental health disparities. An implementation science methodology with demonstrated success in improving mental health disparities among minorities is the utilization of Lay Health Workers (LHWs). LHW Enhancing Engagement for Parents (LEEP) launched an effort to expand the use of LHWs to support families undergoing PCIT. These LHWs, also referred to as promotoras, are trained to help Latinx families overcome barriers that are impeding them from proficiently completing PCIT. Latinx families progress in PCIT will be documented by categorizing the qualitative information promotoras report. Coding and analyzing this qualitative data aids in establishing themes and trends of barriers that cause attrition and prevent families from developing expertise in behavioral training through PCIT. My research evaluates how promotoras help Latinx families overcome these barriers including lack of cultural or language competence (client-therapist compatibility), cultural stigma surrounding mental health, and cultural gender roles and family structure. This template of cultural barrier categories can help concentrate LHW implementation strategies and training to boost enthusiasm and retention rate to optimize treatment in behavior-based therapy and potentially extend to other forms of therapy.

## July 29, 2021 - 9:10 AM PDT Breakout 7: Sociology and Public Affairs Panel H

ROBYN ROBINSON

Kent State University

[\*Criminal Justice & Mental Illness\*](#)

### Mental Illness and Crime

People with mental illness have been mishandled for many years and have been treated like lab rats. Prisons are overly crowded with mentally ill persons and they have now become a threat to society (Vogel, 2014). One's mental illness cannot determine whether someone will break the law, but it is one of many criminogenic, causing or likely to cause criminal behavior, risk factors that interact in complex ways influencing individual behavior (Vogel, 2014). This statement represents the stereotypical barriers that researchers have been fighting. In the public eye the mentally ill are often viewed as "Dangerous" and or "Incompetent" (Phelan, 2013). The problem is that people with mental illness are often labeled and associated with negative stigmas. These negative labels have become embedded in the community, causing numerous misconceptions surrounding people with mental illness. Another prominent concern is that they are not receiving proper care while being incarcerated (Vogel, 2014). Inmates with mental illness are physically victimized 1.6 more times than inmates who do not suffer from mental illness. Their conditions are also likely to become worse depending on the correctional facility. To prevent this from happening researchers have been trying to collect a wider range of data in order to connect specific mental disorders to criminogenic behaviors. Researchers are also continue to search for intervention methods to decrease the incarceration rates of those with mental illness. People who experience mental illness are overrepresented in prisons and that is because they simply don't belong there.

IZZY MIZELL

Rutgers University, New Brunswick

[\*Black Death Throughout History: The Consumption, Circulation, and Exploitation of Black Pain\*](#)

While the documentation, publication, and circulation of acts of police brutality against Black people can be helpful, it is important to critically examine why this explicit content is published and consumed at a viral rate by the American public. By situating and analyzing the consumption of police brutality videos involving a Black victim within the historical context of legacies of violence during slavery, spectacle lynching, and the production of lynching postcards, this research attempts to complicate the dominant cultural idea that the circulation of these videos is overwhelmingly positive. Spectacles of violence during slavery, public spectacle lynchings from 1882-1968, and the circulation of lynching postcards have informed the modern U.S. political climate in which graphic videos documenting police violence against Black people are shared on social media, aired on news stations, consumed at high rates by Americans, and exploited by the American public for monetary gain. This research will identify the progression of public spectacles of violence performed during U.S. chattel slavery to public spectacle lynchings carried out during the Nadir era. Furthermore, this research aims to establish clear and nameable connections between the circulation of lynching photography from 1882-1968 and the circulation of videos that document police brutality from 2010-2021. Additionally, this research aims to explore how systems of oppression such as white supremacy, capitalism, and anti-Blackness allow and encourage violent videos documenting the murder of Black people to circulate on social media sites and news channels despite their horrific and explicit content.

KOLLETTE ZAMORA

University of Texas at Austin

*The school-to-prison-pipeline: How it diverts students from education into the criminal justice system*

Over the last few years, the number of students who have been incarcerated has continuously grown. A key contributor to this trend is the school-to-prison pipeline. The school-to-prison pipeline refers to the idea that schools push students of color and students with disabilities into the juvenile and adult justice system. These educational institutions do this primarily through their use of “zero tolerance” policies as a form of discipline. Zero tolerance is used as a way to discipline students in the same way no matter how small or large the indiscretion is. These policies have shown to have no positive effect on students’ safety and have significantly hurt minority communities. The negative impact is shown through increased dropout rates, as well as outstanding numbers of expulsions and suspensions in schools where the community is mostly minority students. Because of these negative outcomes, many people have called for the reform of policies like “zero tolerance” and offered alternative disciplinary procedures. In this paper, I will explain in detail the key disciplinary contributors to the school to prison pipeline and assess alternative solutions that educational institutions may use to help keep students who misbehave from being introduced to the juvenile justice system early on in life and help keep them from being incarcerated in the future.



## July 29, 2021 - 10:20 AM PDT Breakout 8: Anthropology, Gender, and Ethnic Studies Poster Session A

CLAUDIA MENDOZA CHAVEZ

California State University, Stanislaus

[\*Spanish-Speaking Immigrant Experiences During the Pandemic\*](#)

Undocumented immigrants were excluded from access to federal aid, including in the most recent COVID-19 relief packages. However, the state of California set aside a stimulus payment for undocumented immigrants to support themselves and their families. The primary goal of this research is to examine the effects of the COVID-19 pandemic on Spanish-speaking immigrant Latinx families in the Central Valley of California. I will focus on two areas in particular: 1) access to the stimulus payments and 2) English-Spanish resource communication dynamics during the pandemic. In assessing these two areas, I will evaluate the effectiveness of the current systems in place. To provide further context, I analyze pre-pandemic service utilization studies as a basis for this study. I will employ several data collection strategies to collect quantitative and qualitative data via surveys and semi-structured interviews. Results could inform policy, particularly by enhancing communication and outreach between government agencies and this population. Moving forward, it is crucial to address the economic impacts of global catastrophes and ensure that effective communication of resources is accessible to all populations.

DYANI ACOSTA

University of Minnesota

[\*The Influence Mexican and Mexican Americans Have on Rural Minnesota\*](#)

This research project focuses on contemporary Mexican and Mexican American communities in rural Minnesota. With the steady number of immigrants from Latin American countries increasing for many years, it has been a point of discussion in political and social environments. However, most studies and literature focus on urban Latinx communities, often leaving out the rural Latinx experience. The lack of research done on these communities continues to build a narrative that the Latinx community is monolithic — urban, live in barrios, work blue collar jobs, and much more. These monolithic myths ultimately damage the way society treats the Latinx community, but also how Latinx people view and treat themselves. The belief that all Latinx people experience the same history, oppression, and successes has prevented a holistic historic view of America and its immigrants.

With focus on the history of rural Mexican and Mexican American communities in the last few decades, this project investigates the changes Mexican and Mexican Americans have made in terms of small town culture, the ways they have acculturated in rural areas, what they have built in sense of community, and the legacy they continue to leave behind. The narratives of the Latinx community in rural Minnesota describe the disparities many rural communities already face — the largest being in healthcare, transportation, education, and poverty. However these disparities are exacerbated and layered by racism and xenophobia towards the Mexican and Mexican American community.

KARIME CARRILLO

University of Northern Colorado

*The Coverage of COVID-19 in Hispanic Newspapers in Colorado*

Mainstream media and its coverage is intended for a specific audience. It does not extend to other populations, such as the Latino community; a group that requires more understanding in regards to their language or culture. Because of this disconnect, Spanish-speaking populations may be excluded from information that can be considered life-saving within this pandemic. The dissemination of information is especially important to the Latino community due to its members

being at a higher risk for COVID-19. Other studies have shown clear patterns regarding the lack of access to healthcare information that may consist of current health guidelines, vaccine access, testing, masks, social distancing, etc. Hispanic newspapers serve as a credible source of information for this community to reduce their risk by providing timely, accurate, and culturally responsive information. Hispanic newspapers rely on trust, meaning that they cover COVID-19, intending to give the community the tools to navigate through the pandemic.

This study uses an

interdisciplinary approach that examines La Voz Bilingüe's first-page coverage of Latinos during the COVID-19 pandemic to discover and understand any patterns of information. To examine the front page of this newspaper, the research utilizes specific criteria that consist of three categories informational, action-orientated, and personalization. Alongside this criteria, the research additionally used Benedict Anderson's concept of an "imagined community" to further analyze the coverage and gain perspective on the communities experience.

MARYCRUZ FLORES REYNOSO

University of Oklahoma

*Entre las páginas, Between the Pages: Exploring Latinx Literature*

Latinx is the current term used to group people who have a connection to Latin America. The word carries different connotations and distinctions from Latino/a and Hispanic. Latinx is a word primarily used in academic spaces and within the United States and has been met with criticism. The phrase presents itself as diverse, but the use of the umbrella term can diminish certain aspects of an author's identity. In addition, scholars often examine the use of bilingual writing by Latinx/a/o authors. This element is seen as a quality associated with Latinx/a/o literature, and the dominant feature discussed is the inclusion of Spanish in bilingual writing. The emphasis on how Spanish is used showcases a priority to Latinx/a/o writers who have a connection to a Spanish speaking country and tends to exclude Latinx/a/o writers who use Portuguese, Indigenous, or African based language in their works. This research seeks to highlight the use of the umbrella term Latinx/a/o and bilingual writing as a marker for Latinx/a/o writing. By examining these elements, the research will explore how categories can be positive for some groups but still allow other groups to be absent from conversations about Latinx/a/o literature.

## July 29, 2021 - 10:20 AM PDT Breakout 8: Clinical Medicine, Dentistry and Public Health Poster Session B

DE'ASIA BENJAMIN

Kent State University

[\*Covid-19 affecting the mental health of pregnant African American women.\*](#)

The Covid-19 pandemic has caused mental health stress for many Americans (Ye, B. et al. 2020).2020). Based on prior research, we know that mental health stressors do not impact all social groups equally. As we know, underrepresented women, particularly African American women face higher rates of stressors. This study considers how Covid-19 impacts the mental health of pregnant African American women. In depth interviews with 7-10 pregnant African American women living in Northeast Ohio were conducted in March and April of 2021 via Zoom. Interviews explored the kinds of stressors impacting pregnant African-American women during COVID and the social support they receive from family, friends, and employers to cope with these stressors. The study uses a stress process model approach to interpret findings (Pearlin 1981). These findings help us to understand how African American women are coping with the pandemic.

YAMILET MENDOZA

University of Colorado, Denver

[\*Pathways Linking Health Literacy to Health Outcomes in Young Adults with Type 1 diabetes: A Cross-Sectional Survey Study\*](#)

Hispanic/Latino individuals experience one of the lowest health literacy rates and have the highest diabetic rates in the U.S. compared to non-Hispanic Whites, African Americans, and Asian Americans. The public health significance of these rates is considerable given that this population is increasing in the U.S. There are conflicting findings on the association of health literacy and glycemic control, and the mechanisms underlying this association remains less clear. Our research tests aspects of the Pasache-Orlow & Wolf model, which proposes that three factors, (1) the use and access of health care, 2) the relationship between a patient and a doctor, and 3) self-care, mediate the association of health literacy with predicted health outcomes. Using a cross-sectional study design, 30 patients (18-25 years) were recruited from the Barbara Davis Center for Diabetes. Participants will use Qualtrics to complete Spanish or English versions of health literacy and proposed domain questionnaires. HbA1c levels will be collected from participants' medical records as our health outcome. Bivariate correlations and statistical analyses of mediation will be examined. We hypothesize 1) participants' self-reports and data from their medical records will show low health literacy is associated with higher HbA1c levels, and 2) the proposed mechanisms will explain the association between low health literacy and elevated HbA1c levels among Hispanic/Latino young adults with Type 1 diabetes. Our study serves to future interventions for this growing population, as well as guides providers and the health care system of the role of routinely assessing health literacy.

JENNIFER MERAZ BARRERA

University of Minnesota

[\*Anti-Reflux Formulas: The Effects of Warming on Thickening Attributes\*](#)

Pediatric dysphagia, a deficit inhibiting the ingestion of substances, is burgeoning. One dysphagia treatment is the provision of thickened liquids using anti-reflux formulas such as Enfamil A.R. powder and Ready-To-Feed. While research regarding the thickness of these formulas at room temperature exists, there is a paucity of research on the thickness of these formulas when warmed. Understanding the effect of warming is critical in ensuring clinicians are gaining the desired treatment effect.

Enfamil A.R. formula in powder and ready-to-feed formulations were tested for thickness level using International Dysphagia Diet Standardisation Initiative (IDDSI) thickness testing. A 10mL syringe was filled with formula and allowed to free flow for 10 seconds. The amount remaining was used to classify liquid thickness as thin (0-1mL), slightly thin (1-4mL), mildly thick (4-8mL), moderately thick (>8mL), and extremely thick (fork & spoon test). Powder formulations were prepared and tested at graduated caloric densities (20-30 kcal/oz), while ready-to-feed were tested at 20 kcal/oz. Each condition underwent 3 testing trials, in which the formula was warmed up until 111-119 degrees Fahrenheit. IDDSI measures were collected every 5 minutes.

Warmed ready-to-feed formulas were thinner than their room temperature counterparts. These were slightly thick liquid (1.27mL) at room temperature, whereas they remained thin (0mL) when warmed. Powder formulas were similar thickness under warm and room temperature conditions at 30 minutes; they differed immediately after mixing.

Anti-reflux formulas' viscosity is impacted based on formula temperature. Therefore, elucidating these characteristics is critical to guide infant dysphagia management regimens.

ASHLEY MUNOZ

University of Wisconsin, Whitewater

[\*Satisfaction and Transference of Family-Centered AAC Camp Activities\*](#)

Previous research suggests that successful augmentative and alternative communication (AAC) intervention outcomes are linked to family support. Family involvement may also prevent AAC abandonment. A four day overnight camp, for children (ages 5-15) who use AAC and their immediate family members, was designed to support family bonding, communication, and networking. AAC users, caregivers, and siblings engaged in activities such as crafts, adaptive sports/games, and social events. Fourteen out of fifteen families that attended camp had an adult caregiver complete a fourteen-question exit survey assessing the camp experience, satisfaction, and AAC use. Caregivers indicated high levels of satisfaction (8.5 mean, 2.5 SD). Of the eight camp activities, the dance/ice cream social and bowling resulted in the highest level of participation. Bowling (4 responses) and cooking (3 responses) were the activities most often reported to result in high levels of AAC use at camp. According to six of the fourteen caregivers predicted that bowling and AAC programming instruction would most support family AAC use at home. A second survey will be sent to caregivers one month after camp to determine transference of camp activities to the home environment. It is expected that activities that generated the most communication opportunities with families at camp will be most likely to transfer to the home environment. Results are expected to support best practices in future family-centered AAC camp programming. The project supports families as they reflect on their camp experience and provide feedback to advocate for family gains and needs.

KIM HA

University of Washington

*Investigating Variants in Individuals with Isolated Birth Defects*

According to the Centers for Disease Control and Prevention, birth defects affect 1 in every 33 babies in the United States each year. Our understanding of the genetic basis of birth defects is primarily based on the genes underlying these conditions. However, the genetic basis of isolated birth defects, that is having a single major birth defect, remains largely unknown. The research question for this study is "What are the underlining genetic causes of different isolated birth defects?" To answer this question, I visually screened patient data obtained from the University of Washington Center for Mendelian Genomics. I looked at the DNA sequences in families to confirm the presence of a genetic variant in the affected child and identify the pattern of inheritance for children affected by glaucoma or omphalocele. I also reviewed literature on the genes associated with the variants. We found 6 out of 14 individuals with congenital glaucoma have overlapping genotypes with other disorders affecting vision. In the omphalocele cohort, there were no overlaps in their genotype with other similar disorders. In the Ebstein anomaly (EA) cohort, 7 out of 15 individuals have overlapping genotypes with other disorders affecting the heart. These results suggest that within glaucoma and EA, there are other possible candidate genes that may be of interest for targeted sequencing. There may be additional variants causing glaucoma and EA that have not been identified. The results also suggest that individuals with glaucoma or EA may also be affected by other related medical conditions, respectively.

## July 29, 2021 - 10:20 AM PDT Breakout 8: Education Poster Session C

JEZZABELLA JIMENEZ

California State Polytechnic University, Pomona

[\*Transitional Bilingual Education versus Dual Language Immersion Programs & Students Views on their Preparedness for College\*](#)

Over the past five decades, educational linguists have been keenly interested in the effects of Transitional Bilingual Education (TBE) and Dual Language Immersion (DLI) programs on the academic achievement and literacy skills of language-minority students. Early TBE has been shown to improve oral vocabulary and literacy development in the home language at no cost to English language and literacy development (Durán, 2014). Receiving academic instruction in their native language helps students develop both their academic abilities and English literacy (Cummins, 1976). DLI allows for language proficiency and academic achievement in both languages while also providing a cross-cultural understanding. Valdes (1997), however, questions the quality of DLI instruction, as she examines how language and power relate. Little research has documented how the two types of programs compare. Even less has been done to investigate the students' perspectives on TBE and DLI. The current study examines the relationship between these two modes of instruction through analyzing survey and interview data collected from current college students who participated in either TBE or DLI in K-12. My initial hypothesis is that students' experiences in the TBI or DLI program influence their perceptions of how well they are prepared for college-level studies. This is important for teaching and subsequent research, as we learn more about the similarities and differences between TBE and DLI. This study will help the public, educational institutions, and teachers in further improving TBE and DLI programs and in influencing the policies regarding bilingual education.

VERONICA GOMEZ

Loyola Marymount University

[\*Analyzing Latinx Students in the Upward Bound Programs\*](#)

This study focuses on TRIO: Upward Bound Programs, which have shown to help in increasing college enrollments of low-income students and students of color, and the longer students stay in the four-year program, the better their educational outcomes. Unfortunately, a problem that the program faces is that many students do not stay all four years, and this is especially true for Latinx/ Hispanic students, who have the shortest average duration compared to students with other racial and ethnic backgrounds. Therefore, why do Latinx students have a shorter duration in the Upward Bound Programs? This research project focuses on analyzing one social factor that may be especially important: family involvement since there was more mixed information on this social factor. This project will explore the relationship between family involvement and student duration in the Upward Bound Program through an emailed survey. The emailed survey will be given to 9th – 12th-grade students participating in the LACC Upward Bound Program and will be administered in fall 2021. Students will be asked about their experiences in the program, some of the challenges that they have faced, family involvement and support, and family background and demographic information. Through a qualitative analysis, I anticipate finding that Latinx students with parents who are immigrants face unique challenges that may be affecting their duration in the program compared to other students.

MARIA PEREZ

University of Oklahoma

[\*Obstáculos que Impiden el Exito de Nuestra Educación\*](#)

Despite the increase of Latinx enrollment in higher education, the amount of Latinx graduates from higher education has not increased. In order to understand this phenomenon, this study utilizes testimonials and published articles to examine the commonalities of student experiences, primarily first-generation students, when pursuing higher education as well as their challenges throughout higher education. For the purpose of clarity, a first-generation student is defined as someone whose parent(s)/guardian(s) did not attend college. The intention of this study is to identify the disparities that Latinx students experience and to understand why Latinx students are underrepresented in higher education. Ultimately, creating a more thorough understanding of these issues will assist administrators and professors in supporting Latinx students in academic settings.

KARINA FLORES

University of Washington

*Los Caminos de la Vida: The Impact of COVID-19 on Education in Rural Communities*

In 2020, the COVID-19 pandemic caused students living in rural areas to experience educational disparities. This included familial financial stresses, pushing many migrant students living in rural communities to prioritize work over school. The pandemic shed light on educational disparities featured in rural public-school education systems. The purpose of the study is to examine how the education trajectory of students in rural communities has been affected by the social and economic impacts of COVID-19. To accomplish this, we will examine the extent to which familial needs impacted students' post-high school educational plans, how financial strain influenced their post-graduation choices, and how students practiced resourcefulness and resilience despite economic hardship. In this community-based qualitative research project, we will conduct semi-structured interviews with Eastern Washington high school seniors who are 18 years of age or older and use phenomenological thematic analysis to gather themes related to our research questions. As part of the research, we will collaborate with a community advisory committee composed of teachers and recent high school graduates from Eastern Washington to develop the project's research methods and to ensure the analyses and interpretation of interviews are reflective of the students' experiences. We predict that students will plan to alter their post-high school paths to accommodate their families' needs. Anti-racist - strength-based - frameworks will be used to make academic support recommendations for students. Ultimately, our study can help inform collaboration with community members to find solutions so we can best support students as they navigate pathways after high school.

ALONDRA CRUZ ALMÉSTICA

Wayne State University

*Pictures Books and Translanguaging*

This presentation explores how translanguaging is used in bilingual children's literature and how Latinx authors incorporate Spanish. The use of translanguaging is a common one within bilingual communities, which can be observed in how bilingual children communicate. Pictures books are a method in which children can be exposed to more complex societal and cultural aspects. Bilingual pictures book has the same use as the one mentioned above. However, they also have the task of exposing young children to languages. The purpose of including translanguaging in the text is not to promote proficiency in the student but belonging and understanding. Using a unitary view of language supported by translanguaging (Otheguy et al. 2019), this ongoing investigation aims to find and review bilingual children's literature in order to identify books where translanguaging has been used and if it has been done successfully.

## July 29, 2021 - 10:20 AM PDT Breakout 8: Humanities Poster Session D

JACOB PATRICK TORRENS

University of Colorado, Denver

*How the COVID-19 Pandemic Changed College Student Personal Values and the Effect on Consumer Behavior and Media Consumption: Literature Review & Research Method*

On 11 March 2020, the World Health Organization declared COVID-19 a pandemic. The U.S. government enacted public health measures to reduce the number and severity of cases. Traumatic events, such as the COVID-19 pandemic, often change an individual's values. A study conducted by the Karamanoğlu Mehmetbey University looked at the psychological effects of the COVID 19 Pandemic on society and found that "COVID - 19 is a devastating pandemic that deeply affects all humanity" (Akat & Karataş, 2020). As such, personal values and consumption habits changed because of individuals' lives adjusting to a more secluded lifestyle. These measures, along with the burden of the virus, profoundly impacted most students' individual values and consumption habits across North America. Milton Rokeach, who is a renowned published researcher recognized by the Marketing discipline, developed a theoretical framework for personal values. The framework consisted of 18 terminal "end states of existence" values and 18 instrumental "modes of conduct" values (Rokeach, 1973). This presentation will review main topics on how personal values changed in college students and a proposed research study methodology to answer the question of what type of effect this change had on consumer behavior.

ZAIRA GIRALA MUNOZ

University of Maryland Baltimore County

*Gender, Race and Class Performance as Scripted in Cookbooks*

My research examines gender, race and class performativity as prescribed by print cookbooks from the 1950s-2020. This work attempts to press on the contemporary assumptions that texts and technologies can be inherently post-feminist, or that there has been such an evolution in the construction of these texts that they situate themselves as post-feminist, void of binary gendered roles and regressive socio economic assumptions of class and racial performance and the situation of women in society. A sampling of three to four cookbooks were selected from the 1950s, 1970s, 1990s and 2010s, loosely in alignment with pre-second wave feminism, second wave feminism, third wave feminism and post-feminism, respectively. Utilizing discourse and textual analysis, recipes and their anecdotal accompaniment were reviewed, as well as how the texts were constructing spaces and encoding class, race and gender within their instructions. This research provides support for the existing body of work tracing the pervasiveness of class performance, masculinities and gender binaries and race construction within cookbooks and other technical documents.

GIOVANNI ESPARZA

University of Northern Colorado

*"Jorgensen Enjoys Being Christine": Christine Jorgensen's Public Image and How It shaped a Movement*

While many typically believe transgender issues are new, Christine Jorgensen emerged as a media celebrity in 1952 as one of the first transgender women. Many historians and gender scholars have analyzed Jorgensen specifically in relation to gender, however, they do not analyze her larger role as the first representative of the transgender community. Thus, I ask: In what ways did Jorgensen both positively progress and negatively complicate the transsexual movement? How did Jorgensen articulate her understanding of gender? And in so doing, how did she become a key figure of social movements concerned with issues of sexuality and gender? My research contributes to the larger scholarly conversation about the transgender movement by analyzing the ways Jorgensen used her public platform to both occupy the spotlight and educate the public. She performed in her own show, released an autobiography, directed an autobiographical movie, and spoke at many universities, all to tell her story and answer questions. However, as much as she was an expert on transgender issues, she got into trouble when it came to both the Women's Liberation and Gay Liberation Movements. A product of her time, her views on gender conflicted with feminists and her conservative thoughts on the Gay community's efforts caused many to denounce her. I discovered, however, that Jorgensen's views were transformed through interactions with the efforts of lesbians to declare their rights in 1973. Overall, my paper demonstrates the importance of Christine Jorgensen as an early voice for transgender identity and the fluidity of gender.



## July 29, 2021 - 10:20 AM PDT Breakout 8: MIMG Poster Session E

VANESSA LANGARICA

California State Polytechnic University, Pomona

*Nanofiber Functionalized with Antimicrobial Peptide for Microfiltration and Disinfection of Water*

Contamination of water is a major concern across the world with waterborne diseases being a major cause of death, especially in developing countries with the greatest risk to children. Today the primary methods of water purification involve chemical additives, which have been shown to form dangerous byproducts, harmful to both human health and the environment. Recent engineering has developed novel filter membranes functionalized with antimicrobial nanoparticles like silver and copper. These studies, however, also suggest that metal nanoparticles can leach into filtered water, causing negative effects on health in even small amounts. This project aims to produce a filter using nanofiber functionalized with the affordable, naturally occurring, and non-toxic antibiotic peptide Magainin II, as a safer approach to water sanitization. We hypothesize that Magainin II will bind strongly to the nanofiber and cause lysis of passing bacteria while remaining immobilized on the fiber. I will chemically graft Magainin II onto electrospun nanofiber to create a functionalized filter membrane which I will then pass E.coli contaminated solution through. By collecting the filtrate, I will be able to analyze and compare the disinfection abilities between the control and functionalized membrane to demonstrate that our functionalized nanofiber is an effective tool to safely sanitize water. Protein detection techniques will confirm that Magainin II remains immobilized on the fiber and does not leach into the filtrate. Filtration devices constructed using biological material are a relatively new concept with the potential to be safer and more cost-effective alternatives to earlier methods of purification.

TRIPTI SINGH

California State University, Stanislaus

*Using pH Responsive Poly (Acrylic Acid) Double Helical Mesoporous Silica Nanoparticles to Target Cancer Cells*

The current preferred treatment for cancer is oral chemotherapy because it is the most efficient and does not have as many side effects as other cancer treatments. However, there is a lot of work to be done to improve the efficacy of chemotherapy since it kills healthy cells along with cancer cells. Targeting is an especially useful approach in cancer therapy, as most of the commonly used anticancer drugs have serious side-effects because of their adverse effect on healthy cells. In other words, anticancer drugs in chemotherapy have poor bioavailability when it comes to targeting cancer cells, which greatly limits their applications in cancer treatment. Thus, to improve the drug bioavailability and avoid premature release of the anti-cancer drug before it reaches the targeted cancer cells, targeted drug delivery systems based on nanomaterials are now being explored. Since most cancer cells have a more acidic environment compared to normal cells, an efficient way to control the drug release behavior is by using pH as a stimulus. An experiment will be conducted using an oral drug delivery system in which double helical mesoporous silica nanotubes will be encapsulated with doxorubicin hydrochloride (DOX), a well-known anticancer drug, which will then be released at specific pH level in the body to target cancer cells.

DAVID SARABIA

The University of Texas at Austin

*Use of Untargeted Mass Spectrometry-based Metabolomics to Profile Texas Grapevines*

Vitis vinifera is economically one of the most important plant species. The U.S.A. is the fourth highest wine-producing country, where 87% of grapes harvested from Vitis vinifera are used for wine production. Top state producers include Texas, which encompasses eight American Viticultural Areas (AVAs). Comprehensive characterization of metabolites and biomarkers to uncover signatures specific to the producing regions has been accomplished by leading wine-producing countries. Central Texas endures harsh environmental conditions such as heatwaves and drought during the growing season in comparison to other regions, but wine produced in this region is considered of singular high quality, showing a major increase in wine production in the last decade. Thus, it is imperative to identify wine metabolites and biomarkers specific to the Central Texas region. To our knowledge, there is no research precedent on the relationships between grapevine physiology-metabolism and berry-wine composition over the course of a growing season. Herein, the goal is to characterize for the first time, the metabolomic profile of 17 grapevines from 5 vineyards located in the Texas Hill Country and Mesa AVAs using mass-spectrometry based metabolomics. The second aim is to analyze the produced multivariate data to obtain information about correlations, similarities, and differences between measured metabolites and grapevine varieties using XCMS and MetaboAnalyst. The following metabolomic workflow stages have been accomplished: 1) harvest of grapevine samples, 2) extraction of metabolites of 1/3 of samples using a liquid-liquid extraction 3) experimental analysis using high-resolution mass-spectrometry for untargeted metabolomic profiling, and 4) identification of over 100 metabolites.

JIMMY TANGCHITTSUMRAN

University of Colorado, Denver

*BIOLOGICS DEVELOPMENT AND MANUFACTURING*

Protein biologics are an integral component of biomedical technology and treatments available to patients worldwide. The process by which a human pharmaceutical drug proceeds forward from a research lab to a phase I trial is intricate and requires strict adherence to U.S. Food and Drug Administration (FDA) guidelines. Frequently, it is necessary to develop an upscaled process which is feasible for clinical trials. The mission of the Gates Biomanufacturing Facility (GBF) is "to accelerate the translation of scientific discoveries into human clinical trials as safely, efficiently, and cost effectively as possible according to high quality standards." For the GBF to produce pharmaceutical quality products, it must adhere to Current Good Manufacturing Practice (cGMP) regulations by the U.S. FDA as applied to human pharmaceuticals. Therefore, a solid foundation on Good Laboratory Practice (GLP), laboratory safety, sterile technique, and ISO Clean Room procedures are vital to daily operations. An active project within the Biologics Development and Manufacturing department, is development of a therapeutic vaccine. This project involves technical steps including media and buffer preparation, expressing proteins through fermentation, cell lysis, purification through multiple chromatography steps, and formulation by tangential flow filtration. After the product is manufactured, analytical assays are required by Title 21 of the U.S. FDA Code of Federal Regulations to show potency, identity, safety, and purity. Additional projects will include generation of a research cell bank utilized to generate a master cell bank for production of cGMP grade protein biologics suitable for animal toxicology studies and human clinical trials.

KRISTINE TANDOC

University of Washington

*Identification of synergistic and antagonistic antibiotic combinations for treatment of Mycobacterium abscessus*

*Mycobacterium abscessus* (Mabsc) infections occur in more than 5% of patients with cystic fibrosis (CF), are associated with great lung function decline and are increasing over the last decade. Antibiotic treatment for Mabsc infection can take many months and is often not successful at eradicating the organism, requiring long-term maintenance therapy. The conventional recommended treatment consists of 3-4 drugs, which together have an eradication rate as low as 20% in Mabsc subspecies abscessus. The goal of this project is to collect experimental data to build an in silico model, INDIGO-MABSC, for predicting synergistic and antagonistic antibiotic interactions to treat Mabsc infections in order to identify synergistic interactions between 2 or more antibiotics. RNA was isolated from bacterial cultures treated with individual antibiotics and transcriptomes were sequenced to identify drug-induced gene expression changes. Using broth microdilution checkerboard assays with pairs of antibiotics, we observed how the combinations impacted the growth of Mabsc type strain ATCC19977. This presentation will report efforts to collect sufficient sequencing data and show putative synergistic interactions between drug pairs. Preliminary sequencing data demonstrates that drugs with similar mechanisms of action induce similar gene expression changes and that some drugs induce few or no expression changes, suggesting that higher drug concentrations will be needed. We plan to collect additional RNA from bacteria treated with higher doses of these drugs. We will also perform additional checkerboard testing for INDIGO model training and use these data to build the initial iteration of the INDIGO model to begin testing and refining.

## July 29, 2021 - 10:20 AM PDT Breakout 8: Psychology and Cognitive Science Poster Session F

DANNY TOVAR FRANCO

California State University, Stanislaus

[\*COVID-19: HOW DID IT AFFECT STUDENTS ACADEMICS AND MENTAL HEALTH\*](#)

The purpose of this research is to explore the relationship of technology to a college student's academic achievement for those in college. This study also aims to explore how the switch from face-to-face to online classes could possibly benefit or hurt a student's performance. Self-reported mental health status from pre- and post-pandemic standpoints will also be examined. Participants from Stanislaus State will volunteer to answer the survey which will ask to indicate their mental status and academic history from before the pandemic and during the pandemic period. They will be assessed using a self-report survey in order to measure changes in mental status and academic achievement. An analysis will be conducted in order to show how the sudden change from in person learning to virtual learning has affected how the students do in school and how they may be feeling from not having physical contact with peers and teachers.

NOREEN SINGH

California State University, Stanislaus

[\*Children's Academics, Mental Health, and Social Support During COVID-19 Remote Learning\*](#)

Since COVID-19 was declared a pandemic, nearly all places of business and entertainment were shut down and schools had to move towards remote learning. This was a fundamental shift in how education was conducted. While these changes affected children of all ages, elementary school-aged children may be the most negatively impacted due to their reliance on teachers and classroom support for their learning. Past studies have found that the lack of a structured school routine has disrupted children's engagement in academics and extracurriculars. This study will examine the relationship between social support, stress, anxiety, and depression in elementary school children.

FRANCELIA V. ESPINOZA

Knox College

[\*Perceived Stress and Coping Responses: A context analysis of a detention center in the U.S\*](#)

Asylum seekers in the United States are placed in highly monitored detention centers where they experience high levels of stress. Previous literature has shown that individuals may experience lower stress levels as well as an increase in the likelihood to succeed when proper coping resources are available. In addition, research has found that different coping responses appear (problem-focused and emotion-focused, or a mixture of both) when an individual appraises an event as stressful. Problem-focused coping is more action-oriented; whereas, emotion-focused coping (emotional distress and emotional-approach) regulates emotions to reduce stressors. However, there is not much insight on the various coping responses found in highly monitored spaces, like detention centers in the US. Asylum seekers may not have the appropriate resources to help cope with stress, but they are constantly creating their own ways to have healthy and successful coping responses. Therefore, this research provides a context analysis focused on observing coping responses found in a specific, highly monitored facility located at the border of California and Mexico. Data was collected using confidential transcriptions of helpline calls to an abolitionist, non-institutional collective. Selected callers were identified based on self-identification representing a variety of personalities. By coding the different coping responses, this research will bring further understanding of how environmental, psychological, and physiological stressors interact, especially how stress is appraised during incarceration and detention.

LAILAH ABDULLA

Purdue University Northwest

*The Impact of Virtual Learning on Undergraduate Students' Emotional and Mental Health*

In 2020, the sudden COVID-19 pandemic changed the structure of the world including how and when people are able to gather, the nature of communication, the stability of employment, and more. This virus also thrust unsuspecting students into the world of virtual learning which caused stress and anxiety to rise in students all over the world. Due to the recent concern of this topic, research probing how those increasing issues affect the mental and emotional health of students have been limited. The purpose of this study is to examine the impact that the transition from in person classes to virtual learning has had on undergraduate college students' mental health. To fulfill this purpose, a survey has been constructed and distributed on Amazon Mechanical Turk (MTurk) asking anonymous undergraduate participants the impact this transition has had on their mental health, how they have coped with this transition, and how their relationships with friends and family have been impacted. It is hypothesized that virtual learning will have a negative impact on the mental health of undergraduate students. It is also predicted that higher levels of mental health issues will be reported due to the sudden transition. Lastly, it is predicted that participants' relationships with friends and family will be negatively impacted as a result of the increasing stress that virtual learning causes.

## July 29, 2021 - 10:20 AM PDT Breakout 8: Psychology and Cognitive Science Poster Session G

AVIA BATEMAN

California State Polytechnic University, Pomona

*The influence of interracial friendships on ethnic/ racial identity and psychological well-being of college students.*

Interracial friendships are relationships individuals have with someone from a different racial or ethnic group. In studying interracial friendships, it is important to look at the quality (i.e., trust, dependability, and empathy) and quantity of relationships (i.e., number of interracial friends) to understand how an individual perceives themselves. Interracial friendships have been found to influence an individual's desire to identify and learn more about their own racial or ethnic group (i.e., ethnic, or racial identity; Umana-Taylor, Yazedjian, Bamaca-Gomez, 2004). Research has shown that the quality and quantity of interracial friendships change an individual's racial identity and improves their physical health, mental well-being, and feelings of acceptance by other ethnic group members (Yipi, 2010; Page-Gould, 2014). The hypothesis of the proposed study is that positive connections between interracial friendship quality and quantity will influence ethnic identity and psychological well-being. In the Fall semester, approximately 350 participants will be recruited from a southern California University. Surveys will be developed using validated scales on friendship quality and quantity, ethnic identity, and psychological well-being (i.e., open-mindedness, feelings of distress and enthusiasm). In the Spring semester, analysis will be conducted (e.g., correlation, multiple regression) to test the hypotheses.

SCARLETT MANNING

Loyola Marymount University

*The Eye of the Beholder: Personality Drives Interpretations and Responses to Relationship Events*

In this study, we investigated the role that self-esteem and attachment-related anxiety play in shaping individuals' responses to positive and negative events in their romantic relationships. Our hypothesis was that relative to individuals with high self-esteem or low attachment-related anxiety, individuals with low self-esteem or high attachment-related anxiety would be more likely to engage in a pattern of cognitive, emotional, and behavioral responses that is harmful to their personal and relationship well-being. 137 individuals who were involved in romantic relationships were asked to imagine various specific positive and negative relationship events. Participants' cognitive (rumination), emotional (positive and negative emotions), and intended behavioral responses (acting with hostility; engaging in behaviors towards their partner that they will later regret) to the events were measured via their responses to a survey. We found that individuals with low self-esteem and high attachment-related anxiety were more likely to ruminate about both negative and positive events within their romantic relationships and overthink their handling of these events. Individuals with low self-esteem and high attachment-related anxiety were more likely to experience negative emotion after both negative and positive events within their romantic relationships and experience less positive emotion in response to positive relationship events. When responding to a negative relationship event, those with low self-esteem and high attachment-related anxiety were more likely to indicate that they would act with hostility towards their romantic partner and engage in behaviors they will later regret. Implications of these findings for personal and relationship well-being will be discussed.

YAHAIIRA A. HERNANDEZ

University of Colorado, Denver

*Army Marriage Project*

Although the research regarding military infidelity is sparse, the existing research suggests that military service members and veterans are at higher risk for infidelity. Reasons may include being geographically separated during deployment and/or military stress and culture. Research outside of the military context has identified key psychological variables that may relate to intentions to remain faithful, but this has not been studied in a military context. The goal of the current study is to apply the Theory of Planned Behavior to predict intentions to remain faithful in a sample of male Army service members. Specifically, I will analyze the degree to which attitudes regarding infidelity, norms regarding infidelity, and perceived behavioral control predict intentions to remain faithful. All the data was collected from participants who were recruited for the Army Marriage Project, a clinical trial of relationship education for Army couples. The results will help us understand the factors that may increase the risk of infidelity and/or the intentions of remaining faithful for male military service members.

LISETTE HORNE

University of Minnesota, Twin Cities

*Disclosing Relationship Wrongdoing: The Role of Confidants*

Even in healthy relationships, partners sometimes harm or betray each other. Wronged partners often seek social support from close others, yet the benefits of the positive role of confidants as sources of social support has been understudied. This descriptive study examined people's expectations when disclosing wrongdoing to trusted confidants. What kinds of wrongdoing lead people to seek out confidants? What do wronged partners hope or expect when confiding in another person? How do their feelings change after seeking out a confidant? 200 participants described serious wrongdoing that they disclosed to a confidant, rated the severity of the wrongdoing, described desirable confidant responses, reported confidants' responses to their disclosure, and reported the psychological consequences of that disclosure. Three-quarters of the participants experienced emotional or physical infidelity and approximately one-third experienced physical or emotional abuse. Over half of the sample sought advice, allyship, and emotional support, and about half wanted the confidant to "take their side." Confidants frequently met these expectations by calming the wronged partner down, lifting their spirits, and taking both partners' sides. In eight of ten cases, there was a match between the confidants' responses and the wronged partner's expectations. Furthermore, disclosing to a confidant reduced negative affect and improved positive affect. Results suggest that confidants are underappreciated and understudied as a source of social support when relationship conflict arises, and future research should examine the costs confidants incur when providing support.

BERTHA GONZALEZ

University of Wisconsin, Madison

*Children of Incarcerated Parents and the Role of Caregiver Well-being*

In 2019, about 4.1 million children were living with at least one undocumented parent (American Immigration Council, 2019). Deportation or detention of a parent is a form of forced separation, as well as parental incarceration. There are more than 1.7 million minor children who have a parent incarcerated (Turanovic, J. J., et. al, p. 916, 2012). These numbers only reflect the needs of children who are impacted. Considering the limited scope of resources for the present study, it was not possible to recruit a sample of children impacted by deportation or detention of a parent. Due to this, the present study focuses on children who are part of families where there is an incarcerated parent. Caregivers of children with an incarcerated parent accept new responsibilities and face a variety of accompanying challenges. As mentioned in a qualitative analysis by Turanovic and colleagues, along with emotional distress and economic instability, caregivers struggle with their own coping mechanisms and with helping children understand incarceration. This study helps address the question regarding the influence of the caregiver's well-being on the child's well-being. The current study works to address how caregiver well-being plays a role in children's ability to cope with a parent's incarceration. The present study will focus on data from participants who are between 2-6 years of age, and who have an incarcerated mother or father. It is critical to research and investigate effective methods of support for caregivers as they provide direct care for children impacted by a parent's incarceration.

## July 29, 2021 - 10:20 AM PDT Breakout 8: Sociology and Public Affairs Poster Session H

DENISE ESPINOZA

Loyola Marymount University

*A Systematic Review of Intimate Partner Violence Perpetration among the LGBTQ Military/Veteran Population*

Intimate partner violence (IPV) among LGBTQ couples remains a public health problem in both civilian and military populations. The existing literature tends to focus on male to female IPV perpetration. There is a gap in knowledge on IPV perpetration among the LGBTQ military/veteran population. In an effort to better understand how risk factors uniquely affect this population as veterans or active-duty military members, a systematic literature review, employing PRISMA analysis, is conducted to map out the various gaps surrounding IPV perpetration among the Military/Veteran LGBTQ population by exploring risk factor pathways (i.e., core descriptive, core temporal, and core interactive): Substance Use, Impellance (Dispositional Qualities) Anger Traits, and Relationship Instigation/Provocation factors. Queries were limited to peer-reviewed articles published in Google Scholar and PubMed between 2011-2021. Findings indicate that individual, social, and economic factors are associated with a heightened risk of IPV perpetration among the LGBTQ military/veteran population. Specifically, it was found that low SES, mental health, substance use and misuse, military socialization, and gender paradigms are factors that pose risks for IPV perpetration among the LGBTQ military population. This study provides nuanced information for family counselors, social workers, and behavioral interventionists to gain knowledge about the risk factors for IPV perpetration in the LGBTQ military population.

GUADALUPE JUAREZ

Loyola Marymount University

*Reproductive Rights in Mexico: Legalizing Abortion in Oaxaca*

Reproductive Rights are fundamental to a woman's physical and mental well-being. In the country of Mexico, it is estimated that 750,000 to 1,000,000 illegal and unsafe abortions are performed each year (Almaraz, 2018). Given that abortion has long been unattainable and illegal in most of Mexico, why was abortion legalized in Oaxaca, an indigenous and poor southern state, in 2019? To answer this question, I am examining the role of female leadership in Oaxaca's legislature, high levels of popular organization which arose from the Oaxacan teacher's movement, grassroots organizing by feminist nonprofits and associations, and the influence of the Morena Party which has controlled Oaxacan politics since 2011. My research will rely on scholarly books, articles, newspaper accounts, and congressional debates. In the future, I plan to conduct Skype interviews with Oaxacan politicians and scholars as well as in-country activists from women's NGOs. My hope is that my findings will shed light on how other regions of Mexico can legalize abortion, thereby providing all women in Mexico with access to safe and legal abortions and with the ability to control their own reproductive decision-making.

PATRICK NOLAN

University of Minnesota, Twin Cities

*A Comparative Perspective on Officer Wellness: American Reflections from Norwegian Prisons*

Correctional officers in the United States experience severe work-related stressors and are generally physically unwell compared to similar public employees. An innovative and new approach to improving American corrections that is starting to gain momentum stems from looking at the workplace dynamic in alternative international models, such as in Scandinavian prison systems, for models of workplace reform. This study examines the perspectives of staff and leaders from the Pennsylvania Department of Corrections who traveled to Scandinavia as part of a correctional exchange. Each day of the trip, correctional staff recorded their qualitative reflections and completed a survey about their observations and experiences. This article examines both forms of data to explore correctional officer wellness from the perspective of American correctional officers. Five key themes are discussed: morale, stress, danger, dynamic security, and communication. Survey results suggest that US correctional officers experienced lower stress and more positive interactions during their time in Norway. Key takeaways and implications for policy are discussed.



## July 29, 2021 - 12:10 PM PDT Breakout 9: Anthropology, Gender, and Ethnic Studies Panel A

DEVIN WILLIAMS

Rutgers University, New Brunswick

*Politically Repressing The Proletariat: The Struggle Between The U.S. Government and Black Nationalist Organizations*

Since the end of the Black Power Movement, Black nationalist organizations have dissolved from the mainstream political wheelhouse amongst Black communities across the nation. However, the dissolution and transformation of Black nationalist organizations have less to do with their radical philosophies or the forever-changing political climate, but more to do with the organizations being subjected to political repression. Using Alan Wolfe's (1973) framework of state repression, this research examines the role of political repression in stifling the development of Black nationalist organizations and the Black working-class in Detroit. In this study, I identify incidents of overt repressive action, covert repressive action, and legal action that helped government agencies infiltrate and neutralize the Detroit chapter of the Black Panther Party and the Republic of New Afrika. Although there are other factors at play when examining the outcomes of these two organizations, the politically repressive strategies exercised by the state were pivotal in the Detroit chapter of the Black Panther Party ultimately dissolving twice, and the Republic of New Afrika migrating to Mississippi. Lastly, I argue that the Black working-class became vulnerable to government infiltration as a result of Black nationalist organizations being neutralized by the U.S. government.

MERCEDES HOLMES

The University of Texas at Austin

*Post Blackness and White Co-optimization*

What are the potential avenues that post-Blackness can be co-opted by toxic dominance structures, and has it already?

Compelled by anti-racist positionality, motivated by the interest of preserving the Black identity amidst evolving racialization - this philosophical review and critique of post-Blackness examines the movement as it relates to topics like covert racism, racial identity politics, and Black philosophical welfare. This research is originally inspired by an observed lack of focus in post-Blackness on the most marginalized Black experiences, and an observation of initial failure of post-Blackness to address White infiltrations of the Black experience (such as Black-fishing and "transracialism"). The research question, thus, seeks to examine these and similar suspicions.

Guided by Touré's Who's Afraid of Post Blackness and Charles Mills' Racial Contract, this research will detect and define weaknesses in post-Blackness that are vulnerable to racist corruption and consequences. I will survey extensively post-Blackness and philosophical postures of racism and its persistence, establishing understanding of the subjects. To detect, crystalize, and investigate concerns for post-Blackness, I will jointly analyze these bodies of knowledge under a critical race theory and applied ethics perspective; critical race theory will inform my investigation into topics to fully form any concern, while applied ethics will guide the weighing of the investigation's findings to determine an answer to the research question.

This research hopes to set the foundation for further inquiry into the prevention and combating of racism that post-Blackness is vulnerable to, and methods for determining and preserving Black philosophical autonomy.

ALYSSA FRICK-JENKINS

University of California, Santa Barbara

*Sacred Geographies through Soundscape: Black fem(me)inine spiritual practice as discourse and materiality*

Black fem(me)inine people in the United States have a complex, alienating and disenfranchising gendering and racializing process thanks to a white cis-heteropatriarchy that actively un-imagines our spatial reality and attempts to detach us from the sacred (Spillers, 1987; Davis, 1998; McKittrick, 2016; Tinsley, 2018; Hoskin & Taylor, 2019). In spite of this, the tradition of the Black Sacred fem(me)inine prevails as a recognized and honored representation embodied by Black fem(me)inine people (Razak, 2016). Moving from this sacredness of the body outwards, Black fem(me)inine people navigate an external spatial reality with the same bend towards the sacred— what I theorize as Sacred Geography-making. Black fem(me)inine Sacred Geographies are the material, spoken and semiotic spaces created from, for and by Black fem(me)inine people through spiritual, theoretical and discursive practices. This research in particular engages the “soundscapes”, or spoken aspect of Black fem(me)inine Sacred Geographies, which is accomplished through Black feminist discourse analysis, autoethnographic reflections, and finally case studies that compare the other two engagements with the written and spoken Sacred Geographies constructed by Black Feminist scholars whose landscapes of spoken and written word serve as theoretical praxis and spiritual guidance to and through Sacred Geographies. This interdisciplinary approach pushes the theory of Black fem(me)inine Sacred Geographies by effectively demonstrating, through the three-way conversation between my interviewees, Black Feminist Scholars and myself, the bridging of localities that form a Sacred Geography between us all respectively.

## July 29, 2021 - 12:10 PM PDT Breakout 9: Arts and Multimedia Panel B

AIDAN TAYLOR

Kent State University

*Black Art, Aesthetics, and Imagination as Identity*

Black Americans have created one of the most specific, complex, subtle, and multifaceted cultures in the world. The originality, potency, and value of Black American culture is reflected in the art, aesthetics, and imagination which can be found in that culture. The music, literature, performance and visual art of Black Americans has been a major foundation for what is considered popular art and culture today. What's more, Black American art and aesthetics have been critical to the formation of the Black American identity. There are also crucial connections between Black political/social movements and Black art/aesthetics, one of them being the fact that many of the major movements in both Black politics and Black Arts acted as sister movements, each contributing to the other in major ways. This research project will employ both the Literary Pan-Africanism framework as well as the Kawaida Paradigm in order to effectively explore the phenomena of Black American art, aesthetics, and imagination as identity. These theoretical frameworks will help to effectively analyze the Black American individual and the larger, communal Black American experience by placing the individual, the community, and the art, aesthetics, and folklore which come out of both at the center of the project. In essence, this project seeks to understand, critique, explore, and analyze Black art, aesthetics, and imagination by centralizing the experience, voice and insularity of Black American culture.

ANGEL BLANCHARD

Knox College

*Discussing Black Women in Printmaking Through Black Feminist Thought*

The history of experiences in race, gender, and class has repeatedly excluded the representation of Black women in several spaces despite Black women existing in each of these identities to improve and change the lives of minorities in America. One space in particular where this is seen is within art history, and its many fields of art, specifically, printmaking. As a result, the development of Black Feminist Thought has occurred as a form of consciousness that critiques and redefines Black women's existence based on their invisibility in history, as well as their tendency to advocate for multiple identities. However, there is less focus on Black women in art and how they can function through the lens of this theoretical framework. My paper adds to the discussion of Black women artists and how their art can be interpreted and applied to the framework of Black Feminist Thought. Specifically, I will be looking at 20 different prints by 10 Black women within printmaking and interpreting the connection between their experiences and the representation of printmaking in history. This will allow for me to discuss these works and the artists based on the framework of Black Feminist Thought through ideas based on the existence, definitions, roles, and invisibility of Black women in art history. I argue that by looking at these works from the lens of Black Feminist Thought, an alternative way of interpreting the artworks of Black women can allow for further discussion on this topic within art history.

MICHAEL YIRENKYI

St. Lawrence University

*The Intersection of Architectural Phenomenology and the Japanese Aesthetic*

From the perspective of architectural phenomenology, our built environments have a greater influence on us than we realize. They have an impact on our physical, emotional, and psychological well-being, particularly now as we spend the majority of our time indoors. These spaces inform our habits, moods, and behaviors, as well as our perspectives on everyday life. The meanings and experiences we gain from this interaction strengthen not only our relationships with others, but also our relationships with our surroundings.

What are some of the ways that architecture can address this? The principle of wabi-sabi embodied in Japanese architectural and design aesthetics is one particularly effective way. According to Wabi-sabi, the best way to experience our everyday life is by letting go of the chaos and distractions that take away from these experiences. Wabi-sabi argues that when we do this, we become more conscious of our interactions with others and our environments. These shared experiences become far more precious to us, and this is the key to a fulfilling life. This relationship between space and finding meaning and purpose in our lives is what this project aims to examine.

## July 29, 2021 - 12:10 PM PDT Breakout 9: Atmospheric and Environmental Science Panel C

ABEL ARAGON

University of California, Los Angeles

*Analysis of Paleoclimatic Trends at Seymour Island, Antarctica, Using Clumped Isotope Paleothermometry*

Clumped isotopes are a powerful geochemical proxy within paleoclimatology, enabling further advancements in reconstructions of temperatures. Past studies have shown that the abundance of doubly substituted isotopologues participating within homogeneous carbonate exchange reactions is temperature dependent. Through these substitutions, 'clumping' is observed when two heavy isotopes bond with each other—for this study, the clumping of  $^{13}\text{C}$  and  $^{18}\text{O}$  in carbonates. The vibrational properties of the bonds within the  $^{13}\text{C}^{18}\text{O}(^{16}\text{O})_2$  isotopologue influence zero-point energies of molecules and give rise to a temperature dependence. This can be utilized in calcium carbonate,  $\text{CaCO}_3$ , which is a common mineral found in the shells of marine organisms, allowing temperature to be reconstructed using their fossilized remains from sediments. This project seeks to investigate the change in temperature of waters from off the coast of Antarctica from throughout the early Cenozoic using paleothermometry. This will be done by analyzing an existing isotopic dataset derived from bivalve mollusk samples at Seymour Island, on the Antarctic Peninsula. Currently, the dataset ranges in age from about 34 Ma to 66.8 Ma, covering three major paleoclimatic events that experienced large shifts in ocean temperature. Reconstructed temperatures will be compared to past studies that have recorded these trends to determine whether records produced from clumped isotopes are dependable. In the future, this study looks to expand beyond sea surface temperatures and investigate deep sea temperatures using benthic foraminifera.

NATALIA BERRIOS-RIVERA

University of California, San Diego

*Monitoring submarine volcanism in the eastern Pacific Ocean using an underwater robot*

Two-thirds of Earth's surface is covered by oceanic crust, which is formed when lava erupts at mid-ocean ridges where tectonic plates spread apart, creating the planet's largest volcanic chain. Our understanding of this process is largely informed by data from satellites or ship-mounted sonars, which can only resolve features that are about 30-100 m in size. Here, we present data collected using underwater robot Sentry just 70 m above the seafloor at the East Pacific Rise, a volcanically active fast-spreading mid-ocean ridge segment in the eastern Pacific Ocean. This segment last erupted in 2005, covering an area roughly the size of Manhattan, and we expect it to erupt again within the next few years. Tectonic plate separation is partially accommodated by tectonic strain due to faulting. Faults dam lava flows during eruptions, controlling the shape of the seafloor and the formation of the upper layers of oceanic crust. Analyzing faults near mid-ocean ridges provides insight into how tectonic plate separation occurs, and the factors that control the formation of new oceanic crust. Faults near the ridge axis have a horizontal offset of less than 10 m, which is impossible to measure from the previously existing seafloor data. Data collected by Sentry provides meter-scale mapping of the seafloor, producing a more detailed view of the seafloor than ever before. This allows us to make quantitative fault measurements, which are necessary for studying tectonic plate separation and oceanic crust formation at mid-ocean ridges.

ODALYS CALLEJAS

University of California, Santa Barbara

*Evaluating the exhumation history of the Central Aleutian arc using geobarometry*

Exhumation is a process by which rocks deeply buried or crystallized at depth are brought to the surface in response to erosion of overriding material or tectonic processes. The Aleutian is an ideal location to study the dynamics of exhumation and arc systems in general because (1) it displays an extensive exposure of plutonic rocks and (2) it lacks back-arc spreading or intra-arc rifting, simplifying its exhumation history. In this project, we will obtain a regional data set of exhumation timing, rates, and trends from samples spanning >1400 km of the Central Aleutian arc. To provide a broader context of the Aleutian arc exhumation history, we are studying plutonic rocks (predominantly composed of diorites and granodiorites, which are rocks that are primarily made of plagioclase, amphibole, and quartz). This will allow us to test the various hypotheses for exhumation mechanisms that have been proposed in the literature but have not been directly tested. We will obtain emplacement depths (pressures) by using the Al-in-hornblende geobarometer. Petrographic analyses will be used to constrain the mineral assemblage of samples and microprobe analyses will be employed to obtain mineral compositions. Geobarometry calculations will be used to quantitatively estimate the depth of pluton emplacement. This study will provide insights into arc system dynamics and may help constrain whether magmatic, tectonic, and/or climatic forces drive plutonic exhumation.

## July 29, 2021 - 12:10 PM PDT Breakout 9: Clinical Medicine, Dentistry and Public Health Panel D

GESLYN MAXINE RIOS

Our Lady of the Lake University

[\*Caregiver Strategies for Facilitating Pointing Skills in Infants with Developmental Delays: A Systematic Review\*](#)

**Purpose:** The development of pointing skills is a critical component of communication between infants and caregivers prior to the onset of first words. Infant pointing serves many functions, including making needs and wants known, commenting, sharing information, asking questions, disagreeing and exclaiming, both alone and in combination with other forms of communication. Infants with developmental delays often struggle with development of pointing skills, which impacts ability to eventually communicate verbally. As such, the purpose of this systematic review is to identify the most effective strategies caregivers can use to facilitate pointing skills in infants with developmental delays.

**Method:** A systematic review of the literature was completed to determine effective caregiver strategies to facilitate pointing skills in typical developing infants, as well as infants with developmental delays. A total of 2 databases were searched, including Our Lady of the Lake Sueltenfuss Library and Google Scholar. Keywords used for the search included infant + pointing; caregiver + pointing; infant + developmental delays + pointing; caregiver + strategies + pointing + developmental delays. Inclusion criteria included infants up to age 12 months with developmental delays; infants up to age 12 months without developmental delays; pointing skills; and caregiver interactions. Exclusion criteria included children older than 12 mos., no caregiver involvement, and verbal communication.

**Results:** Results of the systematic review will be provided, stating the most effective caregiver strategies found to facilitate pointing skills in infants with developmental delays.

**Conclusions:** Conclusions will be provided, including future directions for research.

ERIKA VALDES

The University of Arizona

[\*Speech Sound Disorders in Bilingual Spanish-English Speaking Children\*](#)

Speech sound disorders and development in bilingual children is complex. Children ages 3-5 years old raised in bilingual households may deviate in language development compared to an average monolingual child. To prevent a misdiagnosis, it is crucial that a Speech-language pathologist identifies how a speech disorder presents itself in a child who maintains two speech sound systems and uses methods that pertain to both languages. In order to treat developmental issues in a meaningful and effective way, etiology and learning treatments must be considered holistically. The purpose of this research is to explore the factors that aid bilingual children through analyzing the effect of a well-developed teaching and methodology that provides a positive outcome on a child's learning. Speech and language were assessed in diagnostic measures, demographic data, and test data. Bilingual phonological assessments were implemented in a strategic step by step process. The first is reviewing the case history of a child's language usage by obtaining information from parent interviews. Second is obtaining speech samples focusing on consonant accuracy in single word and connected speech. The final step is determining and organizing the phonetic inventory in both languages. Over time, the phonetically transcribed speech samples were compared in order to measure error patterns in both phonological inventories. The linguistic data answers underlying questions about bilingual environments on language acquisition. The long term goal is to fill in these research gaps that are needed in order to provide effective assessment tools and programs for bilingual Spanish-English speakers.

KARA KEMP

The University of Arizona

*Enhanced Conversational Recast Therapy as means of intervention for children with DLD*

Children over the age of 5 have a 1 in 15 chance of having a Developmental language disorder (DLD) and currently, there are more than 5.9 million children in the U.S. who have DLD. Children with DLD often experience difficulties with mastering grammatical morphemes – specifically verbal morphology – subjecting them to both poor academic performance and overall self esteem. To address this concern, we have been testing if using variability in Enhanced Conversational Recast (ECR) Therapy is an effective method of therapy for this population. ECR Therapy is when a clinician responds to a child's words (or utterances) and adds new information while simultaneously continuing the basic meaning expressed by the child. To that end, we have found that children may still benefit from this therapy regardless if their utterances are correct or not. Although data related to this study is still being collected and analyzed, the use of variability in ECR Therapy has promise to be an effective means of intervention for individuals in the DLD population.

## July 29, 2021 - 12:10 PM PDT Breakout 9: Clinical Medicine, Dentistry and Public Health Panel E

MONICA CARDOZA

Knox College

*Maximizing Access to Health Care Resources using Intergroup Dialogue: Healthcare Outreach in Chicago, Illinois and How Community Health Workers' Identities Play a Role in Reaching out to Black, Latinx, and Asian Communities*

Community Health Workers (CHWs) are sprouting across the nation in order to provide health care resources to the communities around them. CHWs serve to bridge and connect people of multiple backgrounds and identities to health care services and health care institutions, while also being mindful of their own identities and the identities of the communities they are working with in order to best fit their needs. While CHWs are working with minority communities, there are still disparities and barriers that affect the lives of many Black, Indigenous, and People of Color (BIPOC). This study seeks to examine how CHWs execute their outreach and how they can work with communities to maximize that outreach. This community-engaged research with CHWs explores intergroup dialogue, how others have used it, and how it can help in contextualizing ourselves. Universities and institutions have been using intergroup dialogue in educational settings as a way to teach social justice. Intergroup dialogue allows for us to talk about our experiences while relating them to our identities in order to create better understanding with the people around us. This project aims to understand how community outreach is affected by identity, and whether intergroup dialogue is a beneficial method for CHWs to explore their identity and how it relates to their work.

SAMANTHA MARTINEZ

Our Lady of the Lake University

*Impact and Access to Healthcare for First-Generation Students*

A first-generation college student (FGS) is one whose parent(s) did not complete a four-year college or university degree. Prior studies indicate that first-generation students who do not have health insurance are affected in their overall well-being. Without the proper medical help, a student may have barriers to a successful journey in college combined with the expectations of a first-generation student. The method of this study will be mixed methods of open and closed-ended questions to examine the link between access to healthcare and overall health for first-generation college students. Participants will be asked to read and agree to an electronic informed consent that will be presented through Qualtrics and complete a 30-question survey. There is a correlation in the research that shows that inaccessible health care for first-generation students has an impact on the financial support or resources of those students and an understanding of the healthcare system. The study findings will help raise awareness to affordable healthcare plans and access to annual check-ups, medication, and therapy.

DANIEL CRUZ

The University of Arizona

*The Use of Telehealth in Cancer Psychological Support Programs: Remote Delivery Outcomes*

Un Abrazo Para La Familia (A Hug for the Family) is intended to increase the accessibility of cancer information to low-income and medically underserved cancer survivors and their families through a 3-hour psychoeducational program. (Marshall et al., 2020). Abrazo's primary goal is to improve the ability of cancer co-survivors to cope with the disease by increasing their social and emotional support. (Marshall et al., 2020). It covers the fundamentals of cancer education, such as what cancer is, what treatment might look like, how to ask your doctor questions, how to support a loved one who has cancer, and how to take care of oneself while caring for someone else. (Marshall et al., 2020). Since its conception, it has undergone numerous refinements and studies in various settings. In the wake of the COVID-19 pandemic, Un Abrazo para la Familia was forced to deliver their cancer psychoeducational program to families through telehealth. Telehealth interventions are effective in the healthcare setting, but little is known about the outcomes of telehealth interventions in the context of psychological cancer support. The purpose of this study is to evaluate the psychological outcomes of cancer support telehealth interventions and provide recommendations on how to improve the pilot program of the remote delivery for Abrazo.



## July 29, 2021 - 12:10 PM PDT Breakout 9: Psychology and Cognitive Science Panel F

CHRISTIAN CARRILLO

California State University, Long Beach

[\*A Literature Review of the Integration of a Multimodal Testing Measure Used to Accurately Diagnose Patients with Disorders of Consciousness\*](#)

A disorder of consciousness (DOC) is when an individual experiences a severe injury to the brain, typically after a traumatic brain injury (TBI), and consciousness becomes impaired. The main disorders of consciousness are coma, vegetative state (VS), and minimally conscious state (MCS). The American Academy of Neurology Practice Guidelines report that 40% of patients receive an inaccurate diagnosis of a DOC by clinicians. Diagnostic error can influence medical professionals to recommend decisions that may lead to premature or ill-suited treatment withdrawal and unsuitable rehabilitative treatments that can induce poorer health outcomes or death. The Coma Recovery Scale-revised (CRS-r) behavioral assessment has been identified as having the strongest content validity and recognizing misdiagnoses compared to repeated behavioral assessments, but no single DOC assessment alone is recommended to diagnose patients who experience DOC symptoms. Revising the assessment criteria would increase the validity and reliability of diagnostic protocol. Neuroimaging techniques are used to measure anatomical and functional connectivity in the brain, and an integration of a neuroimaging technique with a behavioral assessment may be used to accurately identify states of consciousness. The aim of this literature review is to analyze the validity and reliability of common testing measures for patients with a DOC, hypothesizing that an implementation of a multimodal testing measure that integrates sensory stimulation and functional connectivity measures will increase the validity of a diagnosis. The results of this literature review show that a multimodal testing measure can increase the accuracy of diagnosing patients with the appropriate DOC.

ARTURO PEÑA

Eastern Michigan University

[\*Fear Acceptance Versus Fear Reduction for Proper Extinction Learning in Arachnophobia\*](#)

Emotional processing theory is the underlying model for traditional exposure therapy. This approach to exposure presumes that the amount to which fear reduces from peak fear levels within an exposure session predicts successful treatment of specific phobias such as arachnophobia. Inhibitory learning theory (ILT) offers a different approach to exposure centered around forming new non-threat associations (i.e., memories) by way of fear acceptance rather than attempts to focus on reducing fear levels (i.e., fear reduction). ILT may be more effective for helping phobic populations because the model promotes the learning of non-fear associations in the presence of the feared stimuli.

DESMOND CHAMBERS

The University of Arizona

*Major Depressive Disorder: Modern Antidepressant Alternatives*

Antidepressants lessen major depressive disorder symptoms for two-thirds of patients with the psychiatric disorder, and the other third typically acquire treatment resistance. Roughly half of those treated will discontinue medications if symptoms are alleviated. Reports of major depression symptoms denote that deficient gamma-aminobutyric acid (GABA) concentrations linked with dysregulation among dysfunctional networks and emotional processes. Moreover, pharmacology proposes neurotransmitter system alterations, particularly GABA, that modulate emotional processes, notably the Resting-State Networks, will reduce major depression symptoms. However, pharmacological approaches are unproductive given that major depression prescriptions cause extraneous side effects or exacerbate symptoms. Consequently, this research recognizes how antidepressant efficacy emphasizes that pharmacology offers no robust models of treatable root causes. Impending studies reveal alternative mindfulness-based major depression treatments advances, except meditation mechanisms are less established. Transcranial focused ultrasound offers an alternative multi-pronged therapy after recent experiments with the non-invasive stimulation techniques improved mood and likely enhanced meditation practices. Cognitive Psychology network models and neuroscience pharmacology mechanisms will guide this research so that modern multi-pronged treatments are evaluated similarly to antidepressants. This analysis employed functional magnetic resonance imaging that measured functional network changes observed in patients that received ultrasound neuromodulation to components of the subject's Resting-State Network. Additionally, magnetic resonance spectroscopy defined the predicted changes needed to assess relevant neuromodulatory systems, specifically GABA. In this manner, the study will reprocess transcranial focused ultrasound data through additional analysis to extrapolate top-down mechanisms of the non-invasive therapy and mindfulness practices.

YASMIN LANDA

University of Washington

*The Effects of Inpatient Psychiatric Socio-Physical Experience on Posthospitalization Treatment*

In the early seventies, the field of psychiatry was taken aback by Stanford professor Dr. David Rosenhan's 1973 book, *On Being Sane in Insane Places*. Although his findings were later deemed a scientific misconduct resulting from data falsification, his work raised awareness of problematic social and environmental factors in psychiatric facilities. Much has been done to improve psychiatric facilities, but there remains area for growth if the psychiatry field aims to engage and provide patients with a therapeutic setting in psychiatric hospitals. This research explores the relationship between a patient's social and physical experience in a psychiatric hospital and their engagement with mental health treatment after discharge. Using qualitative methodology including ethnographic observations and photographs of psychiatric units in Seattle and interviews with mental health professionals there. Participants are recruited through convenience and snowball sampling. Additionally, an analysis will be provided discussing the environmental factors of psychiatric rooms through the evaluation of room design and its effectiveness in creating a therapeutic environment. Predicted results include a negative relationship between a patient's socio-physical experience in an inpatient psychiatric facility and their engagement in future treatment after discharge. Indicating that a negative socio-physical experience may reduce a patient's continual engagement with treatment posthospitalization. This study will provide a foundation for a second research phase examining patients directly on their experiences. Findings will enable future mental health providers to improve upon these experiences and hence, a patient's receptivity to post-hospitalization treatment.

## July 29, 2021 - 12:10 PM PDT Breakout 9: Sociology and Public Affairs Panel G

CHRISTINA WARE

Baylor University

*Envisioning Equity: An Assessment of the Utilization of Technology in Low and High-Income Schools*

Technology plays a vital role in developed education systems of the 21st century, yet opportunities to engage with technology varies across racial and economic groups of students (Warschauer et al., 2004, Warschauer & Matuchniak, 2010, Bray, 2017). The digital divide defines the gap between racial and socio-economic groups regarding access and engagement with technology. High socio-economic status (SES) schools are more likely to have access to higher quality technology and administration support to aid teachers in their usage and implementation of technology (Warschauer, et al., 2004). Research suggests that technology utilization in mathematics classrooms can have a positive impact on students learning (Mouza & Barret-Greenly, 2015). The value of technology in the classroom depends not just on the presence of technology in the classroom, but on how students use these technologies (Leinwand et al., 2014) to engage with mathematics. My research extends to focus on how technological programs and resources were utilized during the COVID-19 pandemic school year. A survey addressed to mathematics teachers at any public school district will be sent using snowball sampling. I will analyze how teachers utilized technology in their classrooms and the factors included, such as the use of mathematical applications and student satisfaction with technology. The equitable usage of technology will continue to be an important topic of discussion to leaders in education.

RIHAB BOUMZOUGH

California State University, Long Beach

*Resident responses to a proposal to build a low-barrier community homeless shelter: A case study*

How we treat unhoused members of our society is an efficient measure of how healthy our system is. After all, if this is how we treat our most vulnerable, then what does that say about us as a society? In the past year alone, homelessness in California has increased by 12.7% and we have yet to find a humane solution for this issue. In this study we sought to understand how the town of Visalia is responding to its homelessness crisis and compared it to how other cities have addressed this issue. In January 2021, Visalia city officials conducted a “cleanup” of a populous homeless encampment. The unhoused individuals residing in this encampment were reportedly not given enough time to collect their belongings and so when an accidental fire evoked, most of their belongings were burned down. This incident is a perfect example of how city officials continue to fail at addressing this issue in a humane way.

ALEXIS VIVAS FLORES

University of California, Davis

*Returns to Agricultural Technology in Rich and Poor Countries*

Returns to Agricultural Technology in Rich and Poor Countries

Alexis Vivas Flores

Sponsor: Ashish Shenoy, Ph.D.

Economics

The implementation of agricultural technology or techniques is a potential solution to improve the efficiency of crops grown in terrains with different land quality. In this project we explore the land quality and crop choice in both poor and rich countries, where we test the hypothesis that returns to technology are greater for crops that grow in rich countries. In the first step, we found a positive correlation between crop suitability and what is produced across countries meaning that countries grow crops that are suitable for their land. For our second step, we look at R&D investment across high- and low-income countries to determine whether countries invest in the crops they are suitable for. Later in our process, if this hypothesis is correct, we will then quantify how much directed research contributes to the agricultural productivity gap between rich and poor countries by computing the difference between maximum potential yield for high-and-low investment. Our quantitative methods include running linear regressions using data from our main sources FAO, GAEZ, the World Bank, USDA, ASTI, IFPRI databases, and data on national wealth from the Penn World Tables. Our research will contribute to the field of agriculture and development by reinforcing the idea that research does contribute to agricultural production.

## July 29, 2021 - 12:10 PM PDT Breakout 9: Sociology and Public Affairs Panel H

RUBEN LIKOKE  
SUNY Brockport  
[Sense of Belonging](#)

Hey my name is Ruben Likoke and I'll be doing presentation on sense of belonging that goes with and the mental side of it. On how it affects students that come from different backgrounds, environments and opportunities haven't had to that they had to explore opportunities to succeed.

RENO C. GARCIA  
University of California, Los Angeles  
[Exploring Access to Mental Health Resources Among Oaxacan Farmworkers in Madera, CA](#)

There is a growing necessity to meet the mental health care needs of Oaxacan farmworkers in Madera, CA. The mental health care the workers receive is often ethnocentric and fails to consider the structural and systemic factors contributing to their conditions and experiences. This project explores possibilities for adequate mental health care for local Oaxacan farm workers through qualitative methodologies such as testimonios and interviews. Potential findings will help increase access to behavioral health care practices that aim to recognize the importance of Oaxacan medical cultures and cultural understandings of illness and wellbeing.

BIANCA RAMOS  
University of Northern Colorado  
[Tu Lucha es mi Lucha: BIPOC Students' Sense of Belonging in Higher Education](#)

In a racist society, it is necessary to deconstruct and reconstruct learning environments in education. Constructing inclusive and engaging learning environments starts with recognizing the strengths of underrepresented students and identifying the ways that learning environments fail to be inclusive of these strengths. Culturally relevant pedagogy is a way for students to embrace cultural identities, gain critical thinking skills, and develop sociopolitical awareness in classrooms (Ladson-Billings, 1995). The purpose of this study is to understand how culturally sustaining pedagogy impacts the sense of belonging of the BIPOC community at the at a mid-size university in the west. To gain a better understanding on how large universities engage and foster a sense of belonging, I interviewed six BIPOC individuals about their experiences. The semi-structure interviews addressed individual's personal educational experiences, including classroom experience, reflections on curriculum, and feelings of belonging on campus. In order to build inclusive classrooms, it is necessary to acknowledge the different experiences amongst the BIPOC community. Failing to acknowledge these differences hinders the ability to address institutional racism in higher education. Through this qualitative study, large universities gain a better understanding on how to support and foster the sense of belonging of the BIPOC community. The recommendations that the participants make are a call for action, and universities need to listen and act, so that the BIPOC community establish themselves and thrive in higher education.

## July 29, 2021 - 1:20 PM PDT Breakout 10: Chemistry and Biochemistry Panel A

AYOOLA FADONUGBO

California State University, Long Beach

[\*The Computational Modeling of Potential Single and Multi-Domain Glycoside Hydrolases for the Degradation of Polysaccharides in Biofuel Technology\*](#)

The application of enzymatic degradation to polysaccharides creates a useful and intuitive approach to creating biofuels. By making use of single domain and multi-domain enzymes called glycoside hydrolases, polysaccharides can be easily broken down. Using multi-domain enzymes may prove more efficient than using single domain enzymes due to the multiple activity nature of multi-domain enzymes allowing for synergetic activities to occur. Through previous computational approaches, we were able to find several potential glycoside hydrolases with potential cellulase or xylanase activity. Initial biochemical experiments resulted in showing enzymatic activity in two of the five initially predicted putative enzymes. Our goal is to better understand the architecture of putative enzymes. To do this, we utilized computational programs such as SWISS-MODEL, Robetta, and DEMO to model both single domain and multi-domain structures. The results gathered from the computations usually adopt structures of domains based on sequence homology-this methodology resulted in many structures being predicted for each domain. To further understand the structures of domains, comparisons were made between the single domain and multi-domain structure predictions in one program and different programs. Predictions for multi-domain structures showed that single domain structures linked together in an assembly fashion. The results found for both types of domain structures may help design multi-domain structures for glycoside hydrolases that are able to propel biofuel production in the future.

KELLY ANNE SALINAS

Our Lady Of the Lake University

[\*Antimicrobial activity of Capsella burse-pastoris\*](#)

Just in the United States, plants are responsible for attacking fifty thousand different pathogens including fungi, viruses, bacteria, and nematodes. [1] In recent studies, Capsella burse-pastrois has shown to contain a wide range of chemicals including flavonoids, alkaloids, polypeptides, choline, acetylcholine, histamine, tyramine, fatty acids, sterold, organic acids, amino acids, sulfuraphane, vitamins, and many other compounds. [2] Along with this, it has been proven that Capsella burse-pastoris has a long history of having antimicrobial activity by acting as an astringent specifically used for treating excessive uterine bleeding. Physicians have used shepherd's purse to treat hematuria and menorrhagia. Alon side the beneficial aspect of this plant acting as an anti-bleeding and anti-inflammatory -indications of medicinal properties of anticancer have been investigated but maintain a literature gap in conducting all possible anti-cancer research variables in Capsella burse-pastrois. [3]

VICTOR BONILLA

Westminster College

[\*Synthesis, Purification, and Characterization of Ligands for more Stable Iridium Complexes\*](#)

The synthesis of complex organic molecules used in the formation of many diverse products ranging from plastics to medicine will commonly require the presence of a substance which does not directly participate in the chemical reaction, but instead helps initiate or aid the rate of the reaction. These complexes are referred to as catalysts and consist of a molecule composed of both metallic and organic atoms/molecules. The goal of this study is to help produce a more viable and efficient iridium catalyst, in order to improve the sustainability of reactions that require an organometallic catalyst, such as C-H activation reactions. To improve catalytic capabilities, the chemical composition will be altered by attaching, or removing organic molecules from the Iridium center. To perform this reaction we will be following a previously published multistep synthesis procedure. This will require us to synthesize and purify various organic compounds which will then be used in a multistep reaction to eventually produce (1-tert-Butyl-3-(2-(2-acetamido)-3-phenylalanine methyl ester) imidazol-2-ylidene) Ir(iii) bromide. All compounds synthesized in the lab will be analyzed through NMR, and TLC plates, as well as purified through the use of column chromatography. At the moment we have successfully synthesized and purified the first 3 organic compounds in the multistep reaction, and will use these products to continue the overall reaction mechanism.

## July 29, 2021 - 1:20 PM PDT Breakout 10: Communication, Economics, and Geography Panel B

JILLIAN MUNOZ

California State Polytechnic University, Pomona

*Moderating Factors in the Relationship between State-of-Origin Effects, Brand Attitudes, and Purchase Intentions*

Currently, many U.S. state governments have state-labeled logo programs, such as CA Grown or Ohio Proud, which allow local businesses to affix origin information to the products they market within and outside their states. With numerous social and food justice movements becoming more widespread, the public is becoming increasingly aware of the origins and of their food. Consumers have responded positively to state-labeled logo programs, boosting local food sales significantly and drawing attention from industry leaders and academics alike. Thus, comprehensive research is necessary to understand consumer attitudes and motivations for buying local products. To this end, we first systematically search for articles on the topic from agricultural economics and marketing literature, synthesized and integrated past research, and developed a framework that will facilitate future research. Further, we investigate consumers' attitudes and purchase intentions of the products made in their own state and assess factors that could influence consumers' attitudes and purchase intentions, such as state ethnocentrism, vertical collectivism, and need for cognition. Data was collected from 528 students from two different state universities located within the United States. Results indicate that consumers have more favorable attitudes towards and greater purchase intentions for the products made in their own state and that such State-of-Origin effects were further moderated by the level of state ethnocentrism held by residents of the state. This research provides insights into government agencies and marketing literature by extending Country-of-Origin research and investigating State-of-Origin effects in a novel way.

JAELA PERKINS

Kent State University

*Maintaining Relationships through Social Media during the COVID-19 Pandemic*

The COVID-19 pandemic had an unprecedented impact on college students. Since society largely shut down due to the pandemic, students had to adjust to no longer seeing their friends and romantic partners in person. Research has found that college students' friendships are an important factor in their academic success and psychological well-being. Therefore, the purpose of this study is to assess college students' social media use to maintain friendships and romantic relationships during the pandemic. This will be measured using an adapted version of Pfeifer's (2020) online survey, Adolescent Social Connection and Coping During COVID-19 Questionnaire. The survey will be administered via the snowball technique through social media outlets. It is expected that participants will report increased social media contacts with friends and romantic partners compared to pre-pandemic. Also, their reported level of social connectedness will be lower than it was pre-pandemic due to fewer in-person interactions and limited social activities. The findings are expected to have implications for future research related to in-person interactions in friendships and romantic relationships of college students. Also, future researchers should look at mental health as related to the pandemic's effects on friendships and romantic relationships.

MELANIE PADRON

Our Lady of the Lake University

*Generation Z: The New Age of Marketing*

Market forecasting suggests that by 2023, \$517 billion will be spent globally exclusively on social media advertisements. (Maguire, 2020). Generation Z's purchasing power is estimated to be 140 billion dollars in 2019 and is expected to grow. As such, this study's primary purpose is to examine Generation Z purchase behavior, specifically, if there is a relationship between age, income, or race and the number of purchases made as a result of exposure to social media advertisements. Additionally, the study examines if there is a relationship between age, income, and race on purchase type, including clothing and apparel, electronics, and personal care. A 19-question survey was distributed to participants between the ages of 18-24. The survey collected data on the participant demographics, thoughts on social media advertising, and purchasing habits. Statistical analysis is used to interpret the data. The Independent variables for the study are race, age, and household income. The dependent variable is the number of purchases.

Descriptive preliminary findings suggest that social media advertising is influential on Generation Z consumers, and this segment most purchases the clothing category.

## July 29, 2021 - 1:20 PM PDT Breakout 10: Education Panel C

JAMES KIRWAN

Boston College

*Experiences of Students-of-Color that Contribute to Feelings of Isolation, Alienation, and/ or Imposter Syndrome, Specifically During Their Time at Boston College*

There is existing research on racial inequalities in higher education as a whole that highlights “a complex racial hierarchy [that] exists on campus for students to navigate with segregation, isolation, and some levels of integration found among student interactions” (Byrd). There have also been previous research on specific marginalized groups, in this case, First-Generation students, and how “First-Generation college students (FGCS) reported significantly less belongingness with their family and college environments suggesting that they are in fact more likely to experience marginalization in the higher education setting than continuing-generation college students (CGCS)” (Phillippe). However, there has not been substantive research on students of color who are actively or recently experiencing events that contribute to feelings of isolation, alienation, and/ or imposter syndrome, through survey and interview-based narrative analysis. To fill the gap in the literature, our study will focus on experiences of students of color that contribute to these feelings, specifically during their time at Boston College. I want to focus on Boston College as it is a primarily-white-institution (PWI) with students of color who have expressed discontent from the administration with its handling of racist events on campus and to focus on the mental health of the students of color affected by attending this institution.

MICAELA CRUZ

St. Mary's University

*Tale of Two Worlds: The Impact of Race/Ethnicity on the Influencing Factors in the Selection of a Graduate School*

As society has evolved over the decades, so has higher education, specifically in the realm of post-baccalaureate education. Enrollment patterns have mirrored that evolutionary process. However, few research studies have investigated the different factors that have been theorized to be impactful on where students choose to pursue their degrees. Specifically graduate degrees. Previous literature has deemed that certain demographic factors can influence one's decision in selecting a graduate school. Other studies have investigated factors such as financial aid, program reputation, faculty, location, housing availability, etc. to determine their effects on one's decision. The purpose of this study was to explore the relationship between one demographic characteristic, race/ethnicity, and those sets of factors. In other words, how does the emphasis placed on various factors differ between White students and Hispanic/Latinx/Mixed students. Results indicate that there are different existing patterns between the two groups observed in this study, with Hispanic/Latinx/Mixed students placing more emphasis only on location and housing availability. Whereas White students were more concerned with the importance of financial aid, student: teacher ratio, location, faculty, and housing availability.

LINKA T. VILLELA

Texas Tech University

*Effects of Increased Communication and Content Creation on the Classroom Environment at the Collegiate Level at the Texas Tech University Observatory*

We investigate which characteristics of websites provide the best support of communication, information, content creation, and how these reinforce a positive learning environment and increased efficiency in student engagement. We define a methodology to establish web platforms based on departmental and student surveys. We then introduce a plan for a website for the Preston F. Gott Skyview Observatory, which serves multiple courses at Texas Tech. This website will serve as the primary communication for the status of labs, history and gallery for exemplary students and alumni astroimaging and research, as well as a hub to attract funding for observatory upgrades. The gallery provides students with a platform to show off their works, and later reference them. The gallery also serves to support the efforts to increase funding from donors and foundations. We have seen that any increase in communication supports both the department and Observatory, and we believe that establishing educational content provides a multitude of opportunities for student and teachers alike. The gallery also supports the efforts to increase funding. By further analyzing stakeholder opinions via surveys, we expand our Observatory and program efficiency.

MERCEDES ROSS

University of California, Davis

*The Predictive Validity of GRE scores for Communication Doctoral Students*

The General Record Exam (GRE) is a standardized test used to measure a student's preparedness for graduate school. Educational Testing Service (ETS) identifies a student's preparedness as the ability to make a significant scholarly contribution and pass all their graduate courses. Ultimately, the GRE is a tool to distinguish who is ready for graduate school and who is not. The strongest evidence to support validity of the prediction capabilities of the GRE is in the students first year of graduate school, validity after that the evidence is unclear. Minority applicants tend to score lower on the exam than white and Asian applicants and this disparity in scores means that minority applicants are systematically disadvantaged in graduate school acceptance. The aim of our study is to determine if the GRE is a useful tool for predicting graduate school success for Communication students. We are in the process of collecting data on undergraduate GPA, GRE scores, graduation rate, race, age and gender from all the institutions listed in the National Communication Association (NCA) Doctoral Program Guide who grant PhDs in Communication within the United States. Once all the data are gathered, we will assess if the GRE scores predict graduate school success in Communication PhD programs. If the GRE scores prove to be valid predictors of success, then graduate schools should continue to use them. If the GRE is not a good predictor, then graduate schools may be more supportive of minorities by adopting more holistic forms of application review.



## July 29, 2021 - 1:20 PM PDT Breakout 10: Humanities Panel D

VICTORIA MARTINEZ-DAVIS

SUNY Brockport

[\*Erasure vs Extinction : Decolonizing the Taino Narrative\*](#)

Palimpsest describes the way that the past bleeds into the present. Puerto Rico, a country composed of tri-racial ancestry, has historically suffered the transgenerational trauma of colonization and indigenous erasure. This research centers the Taino narrative in comparison to the accounts of Christopher Columbus and other Conquistadors responsible for the mass genocide of the Tainos. Through literature analysis, cultural stories, and mtDNA data, this research spotlights the present importance of Taino influence on Puerto Rico. While some would argue that the Tainos are an extinct group, this cultivation of research decolonizes the narrative and allows Boricua voices to tell their own stories.

RUBY GORDILLO

University of California, Los Angeles

[\*Indigeneity & Its Complexities: Navigating the Literary Formations of the Settler-Colonial Relationship\*](#)

From the moment of initial colonial contact in the 16th century, the settler-colonial relationship between Spanish settlers and Indigenous communities in the Americas has been fraught. A term colonial Spain used to describe the product of these hybridizations between racialized groups in Latin America such as Indigenous peoples and Spaniards, (alongside the English, the French, the Portuguese and the slaves from Africa) was *mestizaje*, a category of traditional hybridization. Over the centuries, the manner in which individuals have employed *mestizaje* produces more problems than it solves, one of them being this strained relationship present in the 20th century between Indigenous and Latino communities. My project is an exploration of the historically fraught relationship between *Latinidad* and *Indigeneity*, focusing on the tensions present in the 20th century between Native Americans and Latinos. The historical implications of this settler-colonial relationship are present in Scott Momaday's novel *House Made of Dawn*, which came out in the 1960s, but still attests to the present-day oppression and subjugation engendered by the system of state violence against Indigenous people by Latinos, who although are also oppressed, are higher in terms of racial hierarchy and therefore benefit from this ceaseless oppression of Indigenous people. With the intention to delve deeper into this critique of the relationship between Latinos and Indigenous people present in Momaday's novel, I bring into conversation a contemporary Native text, Tommy Orange's 2018 *There There*, to see how scholars in distinct disciplines of Latinx and Indigenous literary studies understand this relationship.

SAMOURA HORSLEY

University of Nevada, Reno

[\*Correlation of Craniofacial and Dental Metrics\*](#)

In the field of Forensic Anthropology, one of the major goals is to help identify remains of those where an autopsy is not possible. Creating a biological profile that includes ancestry, stature, sex, and age is how anthropologists are able to obtain the necessary information for identification. Ancestry is of special concern because there is still much research to be done in order to improve methods of population affinity/estimate ancestry. Particularly, there is a lack of research on the relationship between cranial and dental metrics and how the patterns of variation can inform human evolution, growth, and development. Having more information on this topic would improve the effectiveness of the population affinity/ancestry estimation portion of the biological profile needed for the identification of human remains in a medico-legal context. This research has two goals; the first is to evaluate how cranial metrics and dental metrics are inter-correlated, The second goal is to identify patterns in different ancestry populations within the US. These goals will be achieved by collecting data from the remains of donated cadavers of known demographics at the Forensic Anthropology Research Facility at Texas State University. Through the statistical analysis, different metrics are expected to be inter-correlated and to reveal patterns of human variation.

## July 29, 2021 - 1:20 PM PDT Breakout 10: Psychology and Cognitive Science Panel E

KAREN ESPINOSA

Knox College

*Correlation of Oral Contraception Effect on Estradiol Relating to Mood*

While birth control has been available to women for over 50 years, a major reason many women stop using hormonal contraception (HC) is the side effects such as negative mood alteration. Previous research has investigated mood changes during menstruation cycles via survey responses primarily. This study will address the relationship of hormone level fluctuation while taking HC as HC is meant to regulate hormones that typically change throughout the menstrual cycle. This study specifically examines the inactive week of conventional contraceptives to see whether a person's estradiol levels change from typical levels while using HC and the effect, whether negative or positive, during the inactive week of the participants' HC. Data will be collected through surveys and saliva collection. Participants (ages 18-25) were asked to fill out the PANAS (positive and negative affect schedule) Monday through Thursday, and then the DEQ (discrete emotions questionnaire) on Fridays for a more accurate analysis. During the inactive week of the participants' HC, saliva will be collected on day-21, day-24, and day-2 of the next month. Participants will repeat this for month-2. Saliva will be put into an estradiol assay. The levels of estradiol that are measured and survey responses will be assessed through a two-way repeated ANOVA to see if there is a relationship. The importance of understanding what the cause of mood changes is important to further the innovation of drug manufacturing to improve the quality of life of individuals taking HC.

KHADIJAH CLARK

Knox College

*Moral Decision-making between Generations*

Moral judgements are what we believe to be right and wrong, and often these judgments are in relation to the socio-cultural events that happen in our life. One would think that social groups who encounter similar situations would have similar moral judgment, or the opposite if there were contrasting experiences. Generations, for example, are differentiated by common experiences, such as social, economic, cultural, and political events that happen in their cohort. Because of contrasting socio-cultural events that happen in their life, each generation has become distinct from one another. For example, the emergence of technology, which became a construction of character for Generation Z and young millennials, versus September 11 and the falling of the Berlin wall shaping Generation X and older millennials. Previous research has studied both generational differences and how people reason about morality, but there is a gap about whether there is a difference in moral decision-making between generations. In this project, I examine how Generation X, the Millennial generation, and Generation Z react to a forced two choice alternative survey (altruistic or egoistic) of everyday moral dilemmas. My hypothesis is that there will be generational differences, and because Generation Z and Millennials are becoming less conservative, more narcissistic and self-focused, they will choose more egotistical choices than their Generation X.

ETERNITI CLAGGETT

The University of Arizona

*Marital Satisfaction during the Stay-At-Home Order*

The Covid-19 pandemic has presented many challenges for individuals as well as for relationships. Current research shows that individuals experienced loneliness, financial worry, and anxiety in association during the stay-at-home order. The most current research indicates that stress caused by the pandemic increased conflict and lowered the marital satisfaction level of some couples, whereas couples with less conflict had higher levels of marital satisfaction (Lebow, 2020). A well-developed lovemap (all of the information one knows about their partner) allows couples to maintain satisfaction levels when experiencing pivotal life transitions (Gottman & Silver, 2015). Considering the Covid-19 pandemic a pivotal life transition, did the presence of a strong love map allow for couples to maintain their satisfaction levels specifically during the stay-at-home order? The purpose of this study is to test the association between love map strength and marital satisfaction during the stay-at-home order by expanding on the theory of love maps. For this study individuals who were in a marital relationship during the stay-at-home order will be asked to complete altered versions of the Dyadic Adjustment Scale, as well as the Love Map questionnaire in order to test for this association. The results will potentially inform how to maintain marital satisfaction during pivotal life transitions.

## July 29, 2021 - 1:20 PM PDT Breakout 10: Psychology and Cognitive Science Panel F

LAURA ALARCON

John Jay College of Criminal Justice

*Culturally Distinct Psychological Stress: COVID-19's Impact on Latinx Subgroups' Distress Levels*

The Latinx community encompasses many culturally distinct groups who experience distress differently. This study will examine the distress levels of Latinx subgroups before and during the pandemic. It will run a two-way ANOVA statistical analysis on an existing database to investigate changes in distress levels during the specified timeframes. It is hypothesized that data will suggest an increase in the community's distress levels, an increase in subgroups' distress levels from usual levels, and higher distress levels for subgroups with a historically stronger cultural presence in New York as well as for subgroups facing pointed discrimination despite having a historically strong cultural presence.

DAIZHA HUNTER

Purdue University Northwest

*The Perceived Lack of Support at Predominantly White Institutions and Its Effect on the Mental Health of African American Students*

According to Stewart et al. (2008), African American students who attend predominantly White institutions (PWIs), often experience feelings of isolation within their campus environment. The lack of African American faculty and staff along with the lack of support experienced by African American students at PWIs may contribute to lower academic performance and may have a negative impact on the mental health of African American students. The purpose of this study is to investigate how the experiences of African American students attending a PWI may impact their mental health and academic performance. The study also investigates African American students' opinions regarding how PWIs can decrease or alleviate their feelings of isolation, what these students observe as a lack of support, how this lack of support affects their mental health and academic performance, and what types of support they are seeking. To ascertain this information, a survey was created and sent to African American student organizations at Purdue University Northwest, located in Hammond, Indiana, via the organizations' email addresses and GroupMe app. It is hoped that results from the study will shed light on the challenges that African American students confront at Purdue University Northwest and that this information can be used to discuss and initiate changes to the campus environment. Furthermore, it is hoped that the knowledge gained can help enlighten administrators and students at other similar PWIs to create awareness of the issues and increase the support of African American students with similar struggles.

MIRANDA TRAN

University of California, Santa Barbara

*Getting More People at the Table: Asian Americans and their Mental Health Needs*

Asian Americans are estimated to have a 17.3% overall lifetime rate and a 9.19% annual rate of having any psychiatric disorder, yet Asian Americans rank within the smallest percentage of populations accessing mental health care (Takeuchi et al., 2007). The proposed study analyzed themes related to coping and mental health in the ongoing context of the COVID-19 pandemic. The data analyzed was collected using a transcendental phenomenological approach wherein 15 Asian American adults between ages 18 to 30 participated in in-depth interviews about their experiences of behavioral and mental stressors related to the pandemic. The current study focuses on participants' suggestions to addressing the described mental health crisis associated with discrimination throughout the pandemic and supporting the Asian American community. Findings indicate that Asian Americans not only need mental health providers that are conscious of their culture, but also discussed themes regarding community support, cultural sensitivity, familial integration, and reducing familial stigma related to discussing issues of mental health. Additionally, participants emphasized the importance of bridging the language gap and acknowledging possible generational differences. Results suggest that perceived barriers to accessing care are not only systemic but internal to the community. Participant-directed suggestions for increasing involvement with mental health supports are discussed.

## July 29, 2021 - 1:20 PM PDT Breakout 10: Sociology and Public Affairs H

VALERIE TAPIA

California State Polytechnic University, Pomona

[\*Occupational Balance of College Students During a Pandemic: Mental Health and Well-being\*](#)

The COVID-19 pandemic has caused unprecedented changes in the lives of many. College students, in particular, have experienced many changes caused by disrupted living environments, limited social support, and shifts in educational experience. These types of changes of pattern in daily occupations and occupational balance (Elkund et al., 2017) have been shown to be closely related to both physical and emotional well-being (Wagman & Hakansson, 2014). This paper seeks to examine the relationship between college students' occupational balance and satisfaction with participation in activities during the time of COVID-19, and their psychological well-being as manifested by: depression, anxiety, fatigue, and stress. Undergraduate students were recruited through social media advertisements and ResearchMatch. 152 participants (37 male, 109 female, 4 non-binary, 1 transgender, 1 gender-fluid) completed an online survey their well-being during COVID-19. Instruments utilized include the Occupational Balance Questionnaire- Modified (OBQ-M), Meaningful Activity Participation Assessment (MAPA), General Anxiety Disorder 1 Scale (GAD-7), PROMIS Depression Short Form 6a, Perceived Stress Scale-10 (PSS-10), and PROMIS Fatigue Short Form 6a. Correlational analysis examined the relationship between the MAPA and OBQ-M and stress, fatigue, anxiety and depression. The Occupational Balance Questionnaire-11 showed significant negative correlations with measures of anxiety ( $r=-.403$ ), stress ( $r=-.525$ ), fatigue ( $r=-.529$ ), and depression ( $r=-.465$ ), all  $p < .01$ . Of the 152 participants who completed the questionnaire, 73 (48%) reported depression in the at-risk/clinically significant range (T-score $>60$ ), 76 (50%) reported fatigue in the at-risk/clinically significant range, and 83 (55%) reported anxiety in the moderate-severe range (score 10-21).

JUNE SHERPA

University at Buffalo

[\*An Evaluation of the Impact of Virtual Professional Development Training on Working and Developing Professionals in Ghana.\*](#)

A new approach to leadership development, one which is soft-skill oriented, has become an urgent need in professional development training. Many business organizations such as business schools, corporate universities, specialized training companies, and consultancies are facing challenges around graduates lacking soft skills. In previous generations, it was taught to believe that a variable- personality was unrelated to workforce outcomes; research has proven contrary. Studies show that personality which makes up soft skills is a factor driving managerial success, leadership effectiveness, creativity, job performance, team performance. This project observes and evaluates virtual professional development programs concerning increasing soft-skills awareness among developing and working professionals in Ghana. The objective of this project is to examine participants in enhancing their leadership skills and diversifying managerial styles. Data for this evaluation was obtained through surveying and interviewing participants, which revealed the effectiveness of the programs, future improvements, and insight into the various professionals' progress. The findings of this project are significant as it sheds light to the importance of adopting soft-skill training for learners across institutions. Results of this project can be utilized by future working and developing professionals to hone their soft skills and help towards building successful outcomes in future development programs.

EDUARDO SAN JUAN

University of Arizona

*Title IX and its effect on careers in women's intercollegiate athletics*

Classic studies of inequality within labor markets have noted that segregation of women and men into certain job categories is one of the primary causes to differences in social attainment. Understanding how men and women come to be differentially distributed in labor markets, and the features of organizations in which men and women come to be located, is essential to understanding sources of inequality, and gaining insights into potential remedies. By integrating arguments from organizational ecology, institutional theory, and organizational demography, we make predictions about the mobility patterns of male and female coaches in women's intercollegiate athletics. Further, we propose that newly implemented federal legislation that directly addresses issues of inequality, such as Title IX of the Educational Amendments to the Civil Rights Act, has the potential to cause a shift in the relative rates of men and women manager's mobility patterns. We perform preliminary examination of these predictions using data on the mobility of coaches of two women's intercollegiate sports: basketball and volleyball in 319 U.S. colleges between 1972 and 1980. We test our hypothesis by examining the hiring rates of men and women head coaches before and after the passing of Title IX.

## July 29, 2021 - 1:20 PM PDT Breakout 10: Sociology and Public Affairs Panel G

CHAZZLYN JACKSON

Kent State University

*Social Media, Social Movements, and Race*

With the current racial climate and the continual growth of online presence, strong interest has gravitated to social media usage and its causes and effects. Its connection with social movements had been taking a big liking as well. A heightened awareness of social problems has been achieved through media coverage and in this realm specifically, social media by multiple platforms including but limited to Twitter, Facebook, and YouTube. Thus social media usage will be analyzed to study race relations within different social movement organizations (SMOs) and their social media accounts. These organizations being Free Ohio Now, Black Lives Matter Cleveland Chapter, and Showing Up for Racial Justice. The qualitative research method being used to conduct this examination is content analysis. We will be collecting data from the aforementioned SMOs from January 1, 2020 to January 31, 2021 from the accounts online. Coding will be done to organize important themes and central patterns for the ultimate findings of how social media is used within these organizations' social movements in their surrounding communities and beyond regarding race relations.

NELSON ZHONG

Knox College

*A Contemporary Rabbit Hole: The Allure of Right-Wing YouTube*

In the last decade, the far-right movement in the United States has become highly visible in public life, and members of the movement have attributed YouTube for their personal radicalization. However, the majority of research on YouTube's role as a radicalizing agent has studied the platform's recommendations of extreme content; only a few scholars examine the right-wing channels involved with pushing individuals farther right. In order to combat the nuanced, individually experienced process of far-right radicalization, we must deepen our understanding of why and how right-wing content appeals to millions of users. This study offers a qualitative approach to six right-wing YouTube channels and the videos they produce, with a specific focus on how meaning and community is created and referenced in their content. We employ ethnographic video observation and grounded theory approach to notice, record, and analyze the various verbal and nonverbal features present in a channel's videos. We hope our observations will allow us to identify patterns and shared instances of video rhetoric, framing, and style across multiple channels.

JENNIFER SALDANA JIMENEZ

St. Mary's University

*COVID-19 & Latinos: The Power of Misinformation on YouTube*

Abstract

The COVID-19 pandemic proved especially violent for Latinos and other minorities. Crowding, lack of health insurance and access to healthcare, and segregation produced conditions that killed Latinos and blacks from three to six times more frequently than whites. In any such emergency, trusted information is essential; in this case did social media make it worse?

In this study, an initial survey found members of an extended family overrelying on unverified information from social media less likely to steady human decision making than to misinform and mislead. As people died in panic, the message service WhatsApp electrified the two-step flow of communication (Katz and Lazarsfeld), producing results as dependable as the game of telephone. In turn, social media that might produce an agenda setting effect also misinformed. For example, YouTube conveyed misinformation regarding the pandemic throughout 2020, information in turn shared in reverse by the two-step flow by Latinos across the United States.

To assess the dimensions of the problem, this study retrieved and content analyzed YouTube videos in 2020 that contained information about COVID-19, and split them for analysis into five categories. References from The Centers for Disease Control (CDC) and World Health Organization (WHO) were used to fact check the videos. The preliminary analysis provided evidence supporting the thrust of the study.

Keywords: COVID-19, Latinos, Agenda-Setting, YouTube, Two-Step Flow

Abstract titles link to event detail pages.

FRANCIS HADLEY

University of Wisconsin, Superior

*Digital Apathy and Disinformation*

Disinformation is a problem that has been influencing and affecting multiple facets of human experience simultaneously. As technology continues to advance, digital literacy has been struggling to keep up. Despite this, there is very little conclusive data on how people interact with disinformation on social media in their daily lives. This study aims to look at how disinformation manifests itself on social media and present possible points of solution as we go forward. In this context, disinformation is defined as any false information that is intended to mislead, deceive, or confuse.

The study explored digital literacy and disinformation across various generations using 30–45-minute qualitative interviews, conducted remotely with participants across five different states. Respondents were asked about their social media use and digital literacy. The interviews were then coded using inductive coding and analyzed. The results show the effect of digital apathy across multiple generation as well as a lack of digital literacy when it comes to news stories.

The results suggest that digital apathy and illiteracy are fundamental elements that aid in disinformation spread. Fearful of retaliation for going against the curated crowd, respondents would rather not waste their time or energy to correct false information. The need for digital sympathy and literacy is crucial to fight back against rampant disinformation campaigns to protect the future generations of social media.

## July 30, 2021 - 9:00 AM PDT Breakout 11: Atmospheric and Environmental Science Panel A

KENNETH FERRELL JR

Eastern Michigan University

[\*Assessments of streamflow and flooding along the Pere Marquette River, west Michigan\*](#)

Understanding how stream flow in rivers across Michigan is responding to climate change is important because they are used for hydroelectricity, recreation, fisheries, and many people own property along them. Michigan's annual rainfall has increased by 3 inches since 1940 and is expected to increase by 0.036 inches/year through the 21st century due to climate change. In this study, I test the hypothesis that increased rainfall will lead to more-frequent flooding along Michigan's rivers. I do so by analyzing river discharge data and flow-duration curves from a stream gaging station on the Pere Marquette River, the largest undammed river in Michigan. Results from this study show that the discharge on the Pere Marquette River was  $\geq 1,643$  cfs for 27 days and increased 6-fold to 164 days in the 1990s and 2000s. It is likely that other natural rivers in Michigan might also show increases in the historical 1.5 year discharge associated with them and that discharge with the 1% exceedance probability might also increase.

ELSA GONZALEZ

The University of Arizona

[\*Exploring Extracellular Polymeric Substances and Mineral Amendments to Slow Compost Degradation in Arid Soil\*](#)

Climate change is a significant issue that can be attributed to high carbon emissions to the atmosphere. Previous research has identified soil as a potential sink in which we can sequester carbon in order to improve climate change mitigation. Adding compost to cropland is a practice that can encourage carbon sequestration by increasing the amount of organic carbon present in soil. However, Arizona farmers have found that most compost added at the start of the growing season has decomposed by the end of the season. Therefore, in order to improve soil carbon sequestration and the soil health of arid croplands, preventing the rapid decomposition of compost is necessary. The present study examines how adding various amendments to pre-prepared compost affects the decomposition rate of compost. The extracellular polymeric substances xanthan gum and beta-glucans were chosen to examine the potential of adding microbial biomass to compost to improve organic matter stability in soil. Additionally, clays in the form of vermiculite and zeolite were chosen to increase surface interactions between organic matter and minerals. These substances were added in varying amounts to compost obtained from a local composting company and left to incubate for 1, 2, 3 and 7 days. The CO<sub>2</sub> produced by the incubation trials was measured using the Li-Cor 840A CO<sub>2</sub>/H<sub>2</sub>O analyzer to determine decomposition rates. Further research will entail extending the incubation trials for long-term results to determine recommendations for Arizona farmers.

BAILEY MULLINS

University of Nebraska–Lincoln

[\*Analyzing the Data of the Central Nebraska Irrigation Project to Find if Reduction in Water Pumping has Occurred\*](#)

With population growth and effects from climate change the demand for water is increasing, thus finding viable ways to reduce water use is essential. In irrigation dependent regions, the need to reduce water use is important because as the population grows, stress on freshwater sources will increase. This research will determine if a reduction of water pumping due to technology has occurred. We hypothesize that if technology is introduced then there will be less applied irrigation while not affecting crop yield. I worked with the Central Nebraska Irrigation Project lead by the Nebraska chapter of The Nature Conservancy, to find if pumping reduction occurred due to technology being introduced. The Central Nebraska Irrigation Project is a project designed to find ways to increase water sustainability. The technologies introduced were soil moisture probes, center pivot telemetry, an Arable Mark 2 Weather Station, and a flow meter to view irrigation data. Farmers were given technology and trained to use it while control groups had none. In 2018, 2019, and 2020 there were 210.8 acre\*<sup>3</sup>ft, 442.4 acre\*<sup>3</sup>ft, and 701.6 acre\*<sup>3</sup>ft of water pumping reduction respectively. ( $p=.19$  for 2018). ( $p=.27$  for 2019). ( $p=.22$  for 2020). ( $p=.07$  for all three years combined). A reduction in water pumping was seen across all three years. While the  $p$ -value of the water savings was not significant, there would likely be significant results had the funding for the project allowed for a larger sample size. There is also likely a time lag for the behavior of participants to change.



## July 30, 2021 - 9:00 AM PDT Breakout 11: Biology Panel B

MAYA MARTINEZ

University of California, Davis

[\*Utilizing Community-Based Approaches to Evaluate Indigenous and Non-Indigenous Lead Burning on Herbivory in Culturally Significant Flora\*](#)

Cultural burning is a practice done by numerous Indigenous groups in order to improve the qualities and densities of ecocultural resources central to subsistence and spiritual practices. One of the many benefits of cultural burning recorded is the reduction of insect populations in specific and important plant species in hopes to eliminate herbivory, the consumption of plants by animals. This pilot project will build upon past knowledge and utilize mixed qualitative and quantitative methods to show the effect of Indigenous and non-Indigenous led burning on herbivory in plants deemed culturally significant within the Cache Creek area. Community-based participatory research (CBPR) approaches will be the foundation of the research method framework in order to ethically and efficiently gather findings. This will be done through interviews with tribal and community members of this area in conjunction with the post-burn examination of herbivory upon select plant species over different time intervals. It's predicted that interviewees will discuss the ecocultural importance of cultural burning and highlight the differences between Indigenous-led cultural burning and non-Indigenous prescribed fire. In addition, I believe that cultural burning will initially reduce insect herbivory and increase mammalian herbivory. However, over time, both types of herbivory will increase. Currently, interviews are beginning to take place, but fieldwork has yet to be started. Overall, this project aims to demonstrate the value of Traditional Ecological Knowledge (TEK) through CBPR approaches and this presentation will focus on the research process and the intersections of culture, history, and science through an Indigenous lens.

ANTIONETTE YASKO

Purdue University Northwest

[\*Regenerative Stem Cell Therapy for Knee Cartilage Study\*](#)

Degeneration of the cartilage due to osteoarthritis (OA) has proven challenging to treat. Options such as pharmaceutical drugs, total knee replacement therapies, and regenerative therapy techniques have been utilized thus far. However, further improvements in regenerative therapy may allow for OA to be treated at the source in a safe, effective, and cheaper manner. The purpose of this study is to identify the efficacy and variability of regenerative therapies from the current literature. We aim to determine in the last five years, (1) the types of stem cells being used for the regeneration of cartilage in OA patients and (2) determine if scaffolding improved cartilage stem cell growth. Both questions will be used to determine if better patient outcomes are possible by identifying which stem cells work best dependent upon patient outcome. Over an eight week period, data collected from the last five years regarding stem cell types used for cartilage regeneration and scaffolding use will be centered on both clinical trials and retrospective clinical data. Data regarding patient satisfaction, mobility improvement, the quantity of tissue repair, and any side effects will be collected. Statistical analysis will be performed to evaluate the significance of types of stem cells being linked to better patient outcomes, as well as if there is a correlation between using scaffolding and better stem cell growth. With the data collected, specific stem cells can be selected and an experimental design will be created to experimentally test variables related to scaffolding materials to improve regenerative therapy outcomes.

GABRIELLE PETERSON

The University of Arizona

*Exploring the Effects of Environmental Factors in ALS*

ALS is a fatal complex disorder characterized by the degeneration of upper and lower motor neurons. Genetics likely play a role in most cases, however, only 10% of cases are familial while 90% are sporadic. The finding that TDP-43 cellular protein aggregation occurs in 97% of ALS cases illuminated a key component of ALS pathology, however the underlying disease mechanics are unknown. Additionally, disease progression varies between patients. These disease characteristics have led to the consensus that the ALS phenotype is not solely determined by genetics and that environmental factors likely play a role. Physical activity and toxin exposure have been theorized as environmental contributors based on clinical data. One process which could mechanistically link these factors to the ALS phenotype is oxidative stress. Oxidative stress has been shown to induce TDP-43 aggregation in recent studies and many of the theorized environmental factors are likely capable of inducing oxidative stress. Presently, each individual step of this potential pathway has been researched in an isolated manner. To address this holistically, I have designed a comprehensive study that investigates the pathway of environment to ALS phenotype via the proposed oxidative stress mechanism. I am introducing the herbicidal toxin, sodium arsenite, and the common sweetener, sorbitol, as oxidative stress inducing environmental factors via drug food for *Drosophila*. If an ALS-like phenotype based on diminished function can be established in this animal model, oxidative stress and TDP-43 aggregation will be observed and quantified in *drosophila* motor neurons to further elucidate the potential mechanism.

## July 30, 2021 - 9:00 AM PDT Breakout 11: Education Panel C

ASHLEY PINEDA

Knox College

[\*The Effects of Art Inclusive Curriculums Among Low Income Students: A Firsthand Look\*](#)

Over the last two decades, funding for the arts within schools has drastically decreased, which has caused it to fade into insignificance within children's education. The minimalist role the arts has begun to play within schools has overlooked the years of research that have shown the beneficial effects they have on children, specifically within low-income communities. Past supportive evidence for the positive effects of the arts have kept their focus on after-school and summer art programs; thus, overlooking the benefits of the arts within inclusive school curricula. Previous studies have been correlational, quasi-experimental, or experimental and have used surveys and evaluations to obtain data, which has left a gap with regards to qualitative research with data gathered from personal anecdotes and reflections. In this research, the effects of art-inclusive curricula on low-income students was observed via a qualitative and longitudinal basis. Five individuals from low-income households who participated in art-inclusive curricula within the last 8 years were interviewed. Participants discussed what their life was like before, during, and after having participated in an art-inclusive curriculum; their perceptions surrounding the effects and existence of art-inclusive curricula; and, the role they believe the arts should play in the education of children. After each interview, the transcriptions were analyzed as we took note of the ways art-inclusive curricula affected their academic and social habits, perspectives, goals, and overall lives.

VANESSA QUETZERI

St. Mary's University

[\*The Great Equalizer?: How Standardized Testing and the HSI Designation Function to Maintain Racial Stratification Within Higher Education\*](#)

Standardized testing is claimed to be the great equalizer in education because it evaluates a students' knowledge, with complete disregard for the construction of race. However, if that knowledge does not conform to White capitalist norms, it is deemed incorrect. The result is racial stratification across levels of institutional selectivity such that a lower proportion of Black and Latinx students achieve the test scores required for admittance at prestigious institutions, and a larger proportion of White students are admitted instead. Within this context, Hispanic-serving institutions (HSIs) serve to "cool-out" Latinx students while facilitating prestige-driven segregation. That is, HSIs require lower standardized test scores and less rigorous admissions criteria that are accessible to Latinx students and prevent institutions from having to integrate their prestigious schools. In this study, I consider whether the increased access provided by HSIs functions as an equalizing force or whether HSIs contribute to segregation across levels of institutional selectivity. Results indicate that Latinx students remain under-represented at the most prestigious institutions and over-represented at the least prestigious institutions. Because so few HSIs are among the more prestigious, and because such a high proportion of Latinx students enroll at these institutions, HSIs can only be seen as contributing to the problem. Recommendations for equitable admissions criteria are provided.

DANA MALLOZZI

University of Colorado, Denver

*Strengthening the scope of students that the Child Care Access Means Parents in School Program Grant (CCAMPIS) has the potential to reach: A Sociological investigation using qualitative methods of the positive outcomes of the coalition between TRIO, a s*

The college experience is continually evolving as new groups of students enter the university and schools look to engage them. Attracting and retaining students is understood to be critical to the success of higher education institutions. A phenomenon closely related to retaining first-generation and continuing-generation students is the student-parent experience. Accessible childcare is essential to institutions of higher education. It helps students go to college, graduate, find jobs, and earn more in their lifetime. It allows colleges to attract the best faculty and staff. It helps strengthen our nation through lasting economic and social benefits. The literature on college services is replete with references to TRIO, a series of eight highly successful federally funded programs established to help low-income individuals enter college, graduate, and contribute to society. Few investigations have evaluated the impactful role of the Child Care Access Means Parents in School Grant Program that supplements tuition to support and establish campus-based childcare. Its impact is mighty. Even so, CCAMPIS is studied and cited in thinly dispersed education journals; and it remains little known. The majority of studies have approached the subject from an educational perspective; I am proposing a sociological study using qualitative methods to investigate the positive outcomes of the coalition between TRIO and CCAMPIS programs that often serve the same students and share the same goals in retaining them. This research design would consider the topic from a broader perspective, not just student's educational needs but also their human and social needs.

## July 30, 2021 - 9:00 AM PDT Breakout 11: Engineering Panel D

ALEK SEPULVEDA

The University of Arizona

[\*Learning an Unwalked Path: Machine Learning Models for Predicting Pedestrian Trajectory\*](#)

The number of pedestrian accidents, both fatal and non-fatal, continues to increase. As mobile compute power increases, the practicality of smartphones in helping this issue improves. Previous research in reducing pedestrian accidents has explored using embedded smartphone sensors with algorithms to improve the accuracy of pedestrian position and trajectory measurements, providing a warning to both the pedestrian and surrounding vehicles. In order to improve the effectiveness of these warnings, this paper investigates the effectiveness and viability of various models for predicting pedestrian trajectory using mobile phone sensors. With pedestrian motion being individualistic in nature, we present a diverse set of time-series datasets with natural raw motion and location data. This data is collected on a university campus to simulate the potential paths of university instructors and students. Several machine learning methodologies are employed and analyzed for accurately predicting the trajectory of a pedestrian across several prediction times using the data collected. The purpose of this machine learning study is to determine an appropriate model architecture to predict pedestrian trajectory both in accuracy and viability in terms of modern mobile computing power. Although this study is ongoing and we have not concluded our data analysis, we hope that our findings support future traffic system and Pedestrian Trajectory Prediction System (PTPS) research.

NOAH GARCIA

University of Nebraska–Lincoln

[\*Designing a Single-Leg Robotic Exoskeleton for Hemiparesis Patient Gait Assistance\*](#)

The purpose of this study is to design a single-leg robotic exoskeleton for hemiparesis stroke patients in order to assist disabled individuals in performing natural gait patterns. Hemiparesis is a partial loss of muscular strength on one side of the body most commonly brought about by strokes, a leading cause of disability worldwide. Assistive devices such as canes and walkers are commonly used among stroke survivors, but they each carry serious drawbacks relating to asymmetric gait, safety, and ease of use; robotic exoskeletons may eliminate these drawbacks by directly aiding the patient in completing symmetrical gait patterns. Although there are many existing exoskeleton designs for augmenting human strength and other useful functions, this study's design uniquely focuses on correcting hemiparesis patients' gait while providing additional torques that help the patient propel forward and extend their leg, achieving a full range of motion. Existing exoskeleton and exosuit designs were examined, and literature regarding actuation technologies was explored to gauge feasibility related to the design intent. Using the information gathered, a design concept that most effectively satisfied the design's functional requirements was synthesized. A 3D model of the design was then constructed using SolidWorks, and a dynamic analysis was performed to test various components of the design.

SETH CAINES

University of Nebraska–Lincoln

[\*Are microplastic fibers that are usually found in textiles prevalent in Nebraska freshwater bodies?\*](#)

Microplastics are increasingly being detected in freshwater systems and can have negative impacts on the environment including growth limitations of aquatic organisms (G. Chen, Y. Li, and J. Wang, 2021), degraded water quality through the sorption of inorganic pollutants and heavy metals (F. Yu et al., 2019), and a reduction in the dewaterability of activated sludge (J. Xu, X. Wang, Z. Zhang et al., 2021). Although microplastics have been detected in terrestrial and freshwater systems, we do not have a comprehensive understanding of the quantities and types of microplastics that are in freshwater environments. In this study, microplastics were collected from freshwater systems upstream and downstream of wastewater treatment plant discharges, as well as freshwater systems surrounded by both agricultural and suburban land use. The water column was sampled using grab sampling and net sampling approaches. Sediment was also sampled. Other conventional water quality parameters were collected including nitrate, phosphate, total solids, and total suspended solids. We hypothesize that there is a higher abundance of microplastics in freshwater systems impacted by wastewater treatment plant effluent and the most common type of microplastic that will be found will be either polyester, polyamide, or polypropylene, since those are microplastics that are commonly found in textiles. Our study will provide a better understanding of the source of microplastics in freshwater bodies in Nebraska as well as the dominant plastic types that occur in suburban and agricultural areas.

## July 30, 2021 - 9:00 AM PDT Breakout 11: Math, Stats, and Physics Panel E

KIERRA MANUEL

California State University, Long Beach

[\*The Gaussian Distribution\*](#)

The Gaussian (aka normal) probability distribution is a tool of tremendous importance for the statistical analysis of data from many fields. We explore its derivation and investigate the generalization from the univariate to the bivariate case. With these foundations in place, Gaussian Process Regression is defined and basic properties discussed, including modelling considerations. We implement the method in the R programming language for the analysis of education data, and discuss the results in comparison with traditional regression techniques.

ALYSSA BIGNESS

St. Lawrence University

[\*Using R Studio to Explore 40 Years of Winning Results: The Statistics Behind the New York Lottery\*](#)

How does the lottery drawing system work? Is it true that the winning numbers, as well as each individual digit, were chosen at random? This project uses R Studio to investigate two of New York's most popular lottery drawing games to see if the numbers picked are as random as the Lottery Commission claims. This was achieved by applying Chi-Square of Goodness test to determine p-values and identify whether or not there is evidence that the numbers are not drawn randomly. The data utilized to investigate the distribution of winning numbers is the winning numbers for the New York Daily Numbers and Win 4 since the 1980's. The Daily Numbers are three-digit numbers drawn between 000 and 999, whereas the Win 4 numbers are four-digit numbers drawn between 0000 and 9999. The numbers are drawn one digit at a time, so we are investigating the numbers as both 3 (respectively 4) digit numbers, and the individual digits. Along with determining whether the probability of winning is equally distributed, the expected value was also calculated to assess whether playing is worth it.

HAILLE PERKINS

St. Lawrence University

[\*Selecting Galaxies Hosting Supernovae for Observations with The Green Bank Telescope\*](#)

To further our understanding of the evolution of the universe, particularly the distribution of dark matter creating the cosmic web of galaxies and clusters, we need to determine distances to galaxies. The peak luminosities of Type Ia supernovae can be determined from their consistent light curves. Therefore, analysis of Type Ia supernovae within galaxies results in estimates of the distance modulus, a parameter that can be used to determine the distance of a supernova and its host galaxy. This estimate is impacted by the environment of a given supernova. Characterization of hosts thus allows for environmental adjustments to be made to improve the estimate of the distance moduli. In this project, we have determined candidate galaxies for observation with the Green Bank Telescope by crossmatching supernovae from the Democratic Sample of Supernovae (DSS, Stahl et al. 2021) to host galaxies using the Open Supernova Catalog, NASA/IPAC Extragalactic Database, and the Arecibo General Catalog. Information such as luminosity, flux, and position were used to construct the presented candidate list. The observation run will result in the characterization of host galaxies through future analysis of radio emission of neutral hydrogen and data from other observing bands available in digital catalogs of galaxies.

## July 30, 2021 - 9:00 AM PDT Breakout 11: Psychology and Cognitive Science Panel F

HAILEY VAN VORCE

The University of Arizona

[\*Gist vs Detailed Memory: Outcomes in Autism Spectrum Disorder and Down Syndrome\*](#)

Current research has failed to evaluate gist memory in developmental disabilities, like autism spectrum disorder (ASD) and Down syndrome (DS), groups with specific memory deficits. Memory evaluation within the criminal justice system has increased, focusing on eyewitness testimonies and false memory. False memory stems from the fuzzy trace theory or dual-process theory, where the two types of memory processes, verbatim and gist, utilize different retrieval processes. Gist processes rely on semantic features, while verbatim processes rely on surface details. During sleep, memories are consolidated into long-term storage. People with ASD and DS have specific sleep deficits that have been shown to impact memory. Autistic children have reduced sleep latency, while children with DS spend less time in rapid eye movement (REM) sleep, likely decreasing hippocampal activation, reducing memory consolidation (Luongo et al., 2021). To investigate the gist memory in neurodevelopmental disorders, specifically ASD and DS, a developmentally appropriate novel picture-based assessment for a gist memory task was used. In this computerized task, participants will complete a short and long-term delay task, separated by either a period of sleep or wake. Actigraphy watches assess sleep quality which are compared to the gist memory performance taken at each condition. Eye-tracking is utilized to assess attention to stimuli and encoding processes during the gist memory task. This study will be the first to investigate sleep-dependent gist memory in children with neurodevelopmental disorders. It is hypothesized that children with neurodevelopmental disorders will rely more on gist memory than explicit memory, presumably influenced by sleep.

EDWIN ZAMORA

University of California, Los Angeles

[\*Qualitative Methods: Bridging the Gap between Empiricism and Cultural Representation in Autism Research\*](#)

Bilingualism is a growing phenomena among neurotypical and neurodiverse children alike. However, literature on children with disabilities, such as Autism Spectrum Disorder (ASD), has largely focused on how early bilingual instruction may cause further language delays in populations with already impaired communication. Recent studies are beginning to highlight a potential benefit in the preverbal communication, expressive vocabulary, and executive functions of bilingual children. However, 90% of developmental psychology research is conducted on white, U.S., middle class families (the W.E.I.R.D. population). Consequently, families from differing cultural and environmental contexts may be overlooked in these studies. This study employs qualitative methods to bridge the gap in the literature concerning families of Hispanic descent and to explore and qualify the parenting practices that these families use to support their Autistic child's cognitive and linguistic development. At least five Spanish speaking families with at least one child on the spectrum, who is between the ages of five and twelve, will be interviewed. Ultimately, a qualitative approach allows us to capture the language practices that are most beneficial to the current linguistic routines of bilingual, immigrant, Latinx families.

HALEY WITTHUHN

University of Nebraska–Lincoln

*Associations Between Self-Reported Intrinsic Motivation and Challenge Preference in Second Graders*

The construct of motivation has been revealed to be significant in elementary students' academic achievement. Furthermore, evidence shows that intrinsically motivated students perform better on academic tasks than extrinsically motivated students. Challenge preference, which is suggested to be a component of intrinsic motivation, is also predictive of students' academic achievement. The purpose of the current study is to determine if there is a relation between different aspects of self-reported intrinsic motivation and a students' preference for challenge on a puzzle task. A sample of 92 second-grade students completed 2-hour laboratory sessions. Harter's Motivation Scale was used to assess children's self-report of intrinsic motivation across three subscales: challenge, curiosity, and independent mastery. A puzzle task was used to assess children's challenge preference, with higher scores indicating that children chose more challenging puzzles to complete. Bivariate correlations were used to analyze associations between children's self-reported intrinsic motivation and the difficulty of the puzzles they chose. There was a significant correlation between children's intrinsic motivation for challenges and the difficulty of puzzles they completed ( $r = .23, p = .04$ ). However, children's curiosity and independent mastery were not significantly associated with the difficulty of puzzles they chose. Further, none of the intrinsic motivation subscales were significantly associated with the proportion of puzzles the children completed. Children who believe that they prefer challenges actually pursue more challenging options when given the choice. Their challenge preference is not associated with their desire to learn new things or figure problems out on their own.



## July 30, 2021 - 9:00 AM PDT Breakout 11: Sociology and Public Affairs Panel G

ASHLEY SOLES

Eastern Michigan University

[\*Isolation In Older Adults During Covid-19\*](#)

Human beings need to have social interaction to be able to survive. Social and emotional isolation affects not only mental health but physical health as well (Coyle & Dugan, 2012). Recent research reported that “the prevalence of severe loneliness among older people living in care homes is at least double that of community-dwelling populations: 22–42% for the care population compared with 10% for the community population” (Victor, 2012, p. 1). The Centers for Disease Control (2021) reported that 8 out of 10 COVID-19 (reported) deaths in the U.S. are adults 65 years of age or older. This paper examines what older adults are experiencing in long-term facilities during the Covid-19 pandemic and how it is affecting them. Additionally, it discusses how seniors of color are affected differently by the pandemic, and how racism and anxiety are correlated in this situation. This paper offers possible solutions for long-term care facilities in order to improve the quality of life for all residents and staff.

SHECCID ROSALES

Our Lady of the Lake University

[\*Mental Health Practitioners and their views on traumatic events: Family Separation\*](#)

“Professionals in the human services field specify that individuals who experienced forced migration need long-term mental health interventions such as group individual, and family counseling, cognitive behavioral therapy, and learning relaxation techniques, as well as psychosocial education of the host community” (Boisvert, 2006). After a person goes through a traumatic experience, there are so many mental health practitioners to choose from. Minorities already have a lack of experience and knowledge when it comes to choosing one (Mental Health: Culture, Race, and Ethnicity, 2011). This research topic examines the diversity of mental health practitioners a client could choose from when they feel they are ready to speak about traumatic events they have encountered. Furthermore, this study focuses on mental health practitioners and their view on mental illnesses and mental health after a traumatic event. For the study’s purpose, traumatic events include child and/or family separation from those at the border. Data collection includes interviews with mental health practitioners such as: social workers, therapists, counselors, psychologists, religious counseling, religious affiliations, etc. I will be conducting a qualitative research interview process where I will be interviewing mental health practitioners on the topic of their background information, demographics, education, etc. and more in depth questions based on their work with immigrants and the immigration system as a whole. It is important to see what and how each practitioner would treat the same problem and what ways are different when it comes to helping the client.

KATELYN MCVAY

University of Wisconsin, Madison

[\*Human-Environment Interactions and Mental Health Outcomes in the Age of COVID-19\*](#)

Our concept of perceived mental wellbeing and how we use the built environment has been shaped by the COVID-19 pandemic in the past year. This research will investigate how humans in the city of Madison, WI have been using green spaces in the area and if these places have correlated with better perceived mental wellbeing in the age of COVID-19. The study will utilize a variety of quantitative and qualitative research methods and analyses in order to develop a well-rounded theory that will form our understanding of the relationship between mental health and our built environment. Additionally, demographic information will be investigated as well to understand how these data may influence use of greenspaces and possible mental health outcomes.

ALEXANDRIA ELMEN

Westminster College

*Assessing Mental Health in First Responders in Utah*

First responders are emergency personnel that are specifically trained to arrive first on scene to a potentially very traumatic and shocking experience; these experiences can lead to varying degrees of mental health issues from substance abuse, depression, anxiety, post-traumatic stress disorder (PTSD), suicide ideation, and more. About one-third of first responders develop some sort of mental health issue due to the nature of their job (Substance Abuse and Mental Health Services Administration, 2018). The purpose of this study is to evaluate the accessibility, availability, and utilization of mental health resources while also assessing what barriers and risk and protective factors are there. This study is utilizing a cross-sectional mixed methods design; collecting and analyzing data qualitatively and quantitatively through a survey of open-ended and closed-ended questions for first responders to fill out. Implications have shown that the majority of first responders that experience a traumatic experience end up adversely developing a mental health issue, but don't have the means to access it. There is a wide variety of barriers along with risk and protective factors as to why this was so prominent.

## July 30, 2021 - 9:00 AM PDT Breakout 11: Sociology and Public Affairs Panel H

ASHANTI VANIER-WALDRON

John Jay College of Criminal Justice

[\*Identity Changes with CASA Intervention\*](#)

Youth within the foster care system often experience traumatic events such as childhood abuse and neglect prior to entering foster care and may suffer from mental health disorders. These experiences may lead youth to reflect on their identity and self-perceptions. Erik Erikson's identity vs role confusion psychosocial development stage takes into account how adolescents explore various personal values, beliefs, and goals to form their own personal sense of identity. In this research, I will use newsletter columns (including testimonies and impact stories) from youth in Court Appointed Special Advocates (CASA), a foster care program throughout the United States that allows volunteers to advocate for youth within the system. While analyzing the youth stories, I will look for ways youth construct their identity through language, and if there are differences in descriptions for pre-program identity and post-program identity. Discourse analysis will be used to analyze how youth use language to describe identity. Ten newsletters columns will compose an initial sample used to explore similarities and differences in expressed identities and will be used to create a typology of identity-expressing behavior. The preliminary results will be reported and will provide a basis for analysis of additional cases. The analyses will investigate descriptions of pre-program identity contain more negative traits and fewer positive traits than descriptions of post-program identity. This study will ideally produce a typology on various ways that identity can be constructed through language, and to provide a set of discourse markers for future research.

MADELINE TUCKER

Knox College

[\*International vs. Domestic Adoption in Childhood and Perceived Access to Mental Health Care: What are the Outcomes of Depressive Symptoms and Mental Health Care Seeking Behaviors in Adulthood?\*](#)

It has been widely researched and recognized that adoption in childhood is associated with disruptions in the mental well-being of an adoptee at some point in their development. Access and utilization of mental health care resources are known to be effective in the treatment and development of mental health disorders, though these constructs may differ in adopted individuals. A significant gap exists in demonstrating how the perception of access to effective mental health care may have an impact on the relationship between adoption and the later development of mental health disorders. The present study aims to address this potential connection by assessing adoptees' retrospectively reported experiences of mental health care immediately following their adoptions in childhood. Using sources from within the fields of developmental and clinical child psychology, unique connections of mental health are analyzed between two notable samples: domestically and internationally adopted children and adolescents. More specifically, the present study argues that when comparing between both internationally and domestically adopted individuals who were adopted between the ages of 2-12, international adoptees, as a result of social and cultural barriers, will have perceived less access to mental health care resources; subsequently, these individuals will report higher levels of depressive symptoms and less favorable attitudes towards seeking out mental health care in adulthood. This project, which sheds light on an important, yet disadvantaged population, addresses the disparities that exist within the mental health care field and strives to bridge the gaps within the existing literature.

RYAN FLACO RISING

University of California, Santa Barbara

[\*CREDIBLE MESSENGERS: USING LIVED EXPERIENCE TO MENTOR PROMISING YOUTH FROM DEATH ROW\*](#)

This research examines the perceived impact of 50 Youth who are taking part in a correspondence program developed by Obie who is currently on death row in Texas. This project examines the importance of credible messengers using their lived experience to inspire others to change and learn from their past choices that led them to incarceration. The overall outcome of this study is centered on unveiling the importance of individuals like Obie as critical assets to the community as a credible messenger who can mentor youth to become successful productive community members and create a pathway that they can follow to not end up in the same situation. This paradigm allows us to see credible messengers as protectors of communities and gives those on death row who show remorse a chance to receive clemency and be involved in social justice projects from behind the wall that impacts the lives of young people in positive ways.

Abstract titles link to event detail pages.

## July 30, 2021 - 10:10 AM PDT Breakout 12: Anthropology, Gender, and Ethnic Studies Poster Session A

DIANA SOLIS

California State Polytechnic University, Pomona

*Healing Circles as Praxis in Academia: Creating Radical Transformative Self-Care*

Having Healing Circles as a tool not only aided me in coping with racism, microaggressions, sexism, imposter syndrome, and mental health, but it gifted me with empowerment and a sense of identity as a Xicana. My research on Healing Circles focuses on intersectionality, decoloniality, and feminism of color resistance and pedagogy. Healing Circles offer a framework of radical transformative healing tools, particularly for BIPOC non-binary womxn. They offer an intervention to institutional disembodiment. Feminist of color scholars, including Stephanie Cariaga, discuss how institutional disembodiment creates more trauma by forcing a violent separation between the mind and body of students and educators. Most scholars write about healing circles as community-centered practice and as an alternative way to decolonize health care. This paper argues that Healing Circles can be used as a tool in academia to help heal faculty and students in Ethnic Studies.

There is an imbalance in Ethnic Studies between learning about oppression and learning about resistance, what feminist Queer Chicana Scholar, Gloria Anzaldua calls the dark versus the light, respectively. My research question is designed to answer how to focus more on the "light" as a way of healing, especially in Ethnic Studies. The methods I plan to use are Testimonio, Digital ethnography, or Healing-Centered Engagement Theory. Anticipated results are that students and educators reclaim their healing. Since there are few to no Healing Circles in academia, after doing this project I hope to develop a workshop series for institutions outside of Cal Poly.

T'NAYA HALL

California State Polytechnic University, Pomona

*The effects of colorism and inaccurate depictions of African American women in the Media*

Dating back to the very first time African American women were given the opportunity of representation in the TV and film industries, the ways they were most commonly portrayed have been dehumanizing and inferior. Today, we are still seeing similar characteristic traits being used to institutionalize African American femininity and the intention of this project is to expose those inaccuracies and potentially damaging socio-political aspects of the African American female identity. Looking through a lens focused on colorism and the stigmas surrounding African American hair creates an awareness of the ways African American women are portrayed in TV and film productions unjustly and how these stereotypical character roles may have a psychological effect on the self-esteem of young African American girls. Based on these theories, it suggests that if the TV and film industries continue down this path towards biases and inaccurate depictions of African American women, there will sadly never be a solid solution. It is anticipated that this research will help current and future generations of young African American women see more accurate depictions of themselves in the media, which could hopefully aid in the development of higher self-esteem overall. To support my argument, I plan on using surveys, focus groups, and one-on-one interviews to collect data.

ADELEINE VANESSA SANTOS

University of Northern Colorado

*Historical and Contemporary Influences of Settler Colonial and White Supremacist Ideologies, Policies and Practices on Black, Indigenous and People of Color (BIPOC) in the U.S. Education System*

The purpose of this study is to illuminate the legacies of settler colonial and white supremacist ideologies, policies, and practices in the United States educational system, and how those legacies may influence the experiences, opportunities, and acts of resistance of Black, Indigenous and People of Color (BIPOC). It is critical to further explore the effect of the construction and enforcement of a binary that positions western research practices and knowledge as culturally superior to non-western research practices and knowledge. The following question guided this study: How might the legacies of settler colonial and white supremacist ideologies, policies, and practices in the United States educational system influence the contemporary experience, opportunities, and acts of resistance of BIPOC students in the United States educational system? This qualitative study utilized interviews which allowed for the researcher to collect data that is produced from conversations with BIPOC students who have graduated from high school or higher education. Interviews were recorded and transcribed to identify shared themes of BIPOC students. The findings of this study are: 1. the systematic barriers to BIPOC histories and knowledge by normalizing white histories and identities in curriculum and having higher education as primary access to cultural studies. 2. the impact of racialized cultural environments on learning by the exclusive white spaces impacting academic performance, and cultural representation being significant to identity formation and academic success.

AIYANNA GUADIZ

University of Washington

*Caring for Washington's Older Adults during the COVID-19 Pandemic: A Secondary Analysis on the Unique Barriers Experienced by Organizations Serving Historically Marginalized Populations.*

COVID-19 is found to have higher contraction rates and worse outcomes for those in racial and ethnic minority groups, presenting not only a mortality risk but grave health and economic risks for older adults. I conducted a secondary analysis to ask, "What are the unique barriers to social and health service delivery during the COVID-19 pandemic that have affected organizations in Washington State serving predominantly elders in racial and ethnic minorities, clients with low socioeconomic status, and those living in rural areas?" I used survey and qualitative semi-structured interview data collected from 40 senior leaders of health and social services organizations in Western, Central, and Eastern Washington, whose primary client and patient population is low-income, marginalized older adults, and those with dementia. I identified themes within each organization and how they differ depending on their predominant client population (e.g. mostly White clients vs. mostly non-White clients). Preliminary findings indicate that organizations serving predominantly BIPOC clients experience barriers reaching clients virtually because of the digital divide; lack of affordability and accessibility to smart devices like phones, tablets, and laptops. By adopting a Participatory Action Research model, I can inform and educate society on the barriers these organizations face to providing equitable care to elders and use my findings to create a community-based action plan that responds to these challenges and keeps our older adults safe and healthy.

## July 30, 2021 - 10:10 AM PDT Breakout 12: Atmospheric and Environmental Science Poster Session B

ALYSSA KONOPA

University of Wisconsin

*Circular Economy and Sustainability: Evidence from Small Businesses of Milwaukee*

Consumerism guided by linear economic principles which emphasize the extraction, utilization, and waste of material resources for financial capital gain has proven unsustainable as staggering resource exploitation and ecosystem degradation threatens a global sustainability crisis that cannot be reconciled within a linear society. This research proposes the paradigm shift to a nonlinear, circular society as a solution to the global sustainable development crisis; the circular economic model represents a zero-waste, closed-loop system that builds environmental, economic, and social capital while regenerating ecosystems. Further, my research identifies local sustainable business management as a key leverage point in supporting global Sustainable Development Goals. Data indicates that the integration of circular management practices into local small business models can act as a catalyst for the paradigm shift to a circular society. Case studies were conducted to analyze sustainable management practices amongst small businesses in Milwaukee. Representatives of local small businesses, community organizations, and sustainability experts were interviewed and surveyed in order to collect qualitative data regarding current sustainable management practices, sustainability challenges, and local infrastructure barriers. The subsequent comparative analysis addresses the infrastructure barriers that create sustainability challenges in Milwaukee, and indicates the necessity for both systemic reform and community action in the successful integration of circular economic principles. My research reflects that circular management applied at key leverage points within local small business models can create a ripple effect that significantly impacts global Sustainable Development Goals while serving as a catalyst for the paradigm shift to a circular society.

JORDAN GREEN

Wesleyan University

*Vegetation recovery, plant hydrology, and functional differences post-fire evapotranspiration in a southwestern pine-oak forest, Arizona, USA*

Post-fire stand, water balance, and hydrology are critical factors influencing vegetation recovery after a wildfire. Fire severity, and the amount of fire-induced tree mortality influence post-fire vegetation water cycling, as the rate of water movement from the soil to the atmosphere, depends upon the amount of live vegetation cover in the wake of wildfire. We examined the influences of fire severity on diurnal plant evapotranspiration (ET) rates, as measured by sapflow, by installing a network of 45 tree sapflow meters across the fire severity gradient of the 2011 Horseshoe Two Fire in the Chiricahua Mountains of southeastern Arizona. Unlike many high-severity fire sites, post-fire ET was high at shrub-land sites at high fire severity burns. In this study, post-fire ET was driven by plant species composition and forest stand structural complexity. The more drought-sensitive pines display a peak in transpiration early in the day during the peak of photosynthesis, closing their stomata midday as a water conservation strategy. Cypress and oaks maintain high sap velocity through sundown, demonstrating multiple peaks throughout the day. Our results suggest that plant functional traits and stomatal regulation of gas and water exchange play critical roles in explaining post-fire forest recovery trajectories. The ability of the cypress and oaks to keep their stomata open throughout the day and high transpiration rates may be a key mechanism explaining their success on high-severity sites relative to pines. These results provide key information for predicting post-fire plant communities and forest water cycling under future environmental change.

LAUREL GOULBOURNE

Wesleyan University

[\*SEM Analysis of Quartz Microtextures for Pleistocene\*](#)

Ice-rafted sediment is deposited into the deep sea through abrasive and crushing processes causing the micromorphology of embedded quartz grains to alter. As quartz are high in silica and not easily eroded, their features could be paramount for accurate rebuilding of past ice-cap levels. Paleoclimate reconstructions require a quantitative analysis of ice-rafted debris (IRD) for heightened intervals. To gain further insight for paleoclimate estimations at Pleistocene sediment layers, the surface textures of quartz grains from the International Ocean Drilling Site U1537D, were analyzed by the Scanning Electron Microscope (SEM). These samples originate from the Dove Basin where countercurrents were influenced by Weddell Sea Deep Water flowing (WSDW), making this a unique reference site for examination. The goal of this study was to analyze shifts in glacial ice-caps through a dissection of quartz samples from Pleistocene intervals. This study's primary hypothesis claims that younger quartz grains at high IRD intervals display microstructures reflective of glacial fractures.

YAIZA KINNEY

Wesleyan University

[\*Below Iceberg Alley: Tracking Antarctic ice loss from a previous global warming\*](#)

The International Ocean Drilling Program (IODP) Site U1537 is located in the Dove Basin off the coast of Antarctic Peninsula in a region known as "Iceberg Alley." After an iceberg breaks off the Antarctic Ice Sheet, it travels northward towards "Iceberg Alley" via the Antarctic Circumpolar Current and melts, resulting in the iceberg-rafted debris (IRD) being deposited on the seafloor. Grain-size analyses of IRD from a Site U1537 sediment core allows us to track and recreate glacial and climatic changes in Antarctica over the last few million years. Here I will present the grain-size and weight percent IRD data from roughly three million years ago (MYA) in order to determine past Antarctic Ice Sheet mass loss. Recent climate models suggest that 3 MYA global surface temperatures were around 3°C warmer than pre-industrial temperatures as a result of elevated greenhouse gas concentrations. As modern global temperatures continue to skyrocket at an unprecedented rate, it is vital that we understand past changes in the Antarctic Ice Sheet to better predict future changes in polar ice-sheet volume and global sea level over the next century.

## July 30, 2021 - 10:10 AM PDT Breakout 12: Chemistry and Biochemistry Poster Session C

KRISTAL STEVENS

Loyola Marymount University

[Measuring the Frameshift Efficiency of the Human OC43 Coronavirus](#)

One of the earliest identified human coronaviruses is the human OC43 coronavirus (HCoV-OC43). This endemic virus is associated with the common cold. Protein synthesis is a critical step in the virus life cycle. To make a subset of viral proteins, the ribosome must slip at a specific point in translation. When the ribosome slips backward by a single nucleotide, it continues translation in an alternate -1 reading frame to produce this subset of proteins. Although this event is rare in cellular mRNAs, the proteins produced from the frameshift are necessary for viral replication. While the coronavirus research field has made substantial progress in understanding the basic principles of coronavirus replication and disease development, the frameshift efficiency of the HCoV-OC43 has not been measured. The frameshift efficiency describes how often the ribosome slips at the frameshift site. We hypothesize that the HCoV-OC43 frameshift efficiency will be similar in magnitude to SARS-CoV-2 (~36%) because their frameshift sites are comparable. To fill this gap in knowledge, we used a well-established dual-luciferase assay to measure the HCoV-OC43, SARS-CoV-2, and HIV-1 frameshift efficiencies. The SARS-CoV-2 and HIV-1 frameshift sites served as positive controls. A negative control lacking a frameshift site structure was also included. Preliminary results from a single biological replicate suggest that the HCoV-OC43 frameshift efficiency is roughly 35-43%. Future work will include the additional replicates needed to conclusively quantify the frameshift efficiency. Our investigation will ultimately provide insight on a critical step in the HCoV-OC43 life cycle.

DAMIELLE HIEBER

University of Washington

[Saliva Analysis and Bacteria Capture Using a Novel Collection Method](#)

Standard diagnostic tests for common bacterial and viral infections are invasive and uncomfortable. Difficulty performing these tests may delay or prevent diagnosis in children which leads to more severe consequences. Delays may occur due to children's noncompliance or difficulties of access to a clinic. There is a need for more accessible diagnostics to prevent these complications. This research investigates strep throat as a disease caused by an infection of the bacterium *Streptococcus pyogenes*. Our goal is to create a novel saliva collection platform that is designed and engineered to be child-friendly, effective at pathogen collection, and is suitable for home use to address this problem. The device is uniquely designed to be attractive to children as well as optimized for collection of the pathogen. The prototype devices are developed using 3D printing, computer numerical control (CNC milling), and molding. Human subjects studies were performed to examine usability and inform further design. Preliminary results show the device's ability to capture the bacteria has been optimized. Participants in the studies were satisfied with device and consistency in usage. Once the device and system are established, it has potential to be adapted for additional diseases which increases the versatility.

HANG YANG

Wesleyan University

[Pathogenic bacteria biofilm matrix protein adhesion vibrio polysaccharides](#)

*Vibrio cholerae*, a pathogenic bacteria, form biofilms as a way to protect themselves from environmental threats and enable adhesion to host surfaces. The biofilm is a composite of organized clusters of cells, vibrio polysaccharides (VPS), biofilm matrix proteins, and other matrix components. My project focuses on RbmC, a biofilm matrix protein that may have an adhesive role in biofilms. Previous studies identified another biofilm matrix protein, Bap 1 with high sequence homology to RbmC, that has domains that are involved in biofilm and environmental surface adhesion and other domains that are involved in protein to VPS adhesion. Both proteins play dominant but differing adhesion roles in the *Vibrio* biofilm. We want to explore whether RbmC are able to bind to the VPS that make up a majority of the biofilm structure, as well as other sugars that may be found on surfaces of hosts. I will be cloning, expressing, and purifying different combinations of domain segments of RbmC. Larger soluble fragments of RbmC will be useful in structural and functional explorations into the roles of RbmC in the biofilm. Understanding the roles of matrix proteins in cell-cell interactions and cell-surface adhesions in biofilm formation is crucial to the study of how pathogenic bacterium such as *Vibrio cholerae* endure environmental threats and transmit diseases to human hosts.



JUSTIN NGUYEN  
Wesleyan University

*Optimization of mini-Fluorescence Activating Protein (mFAP) brightness with a small chromophore DFHBI*

Proteins are crucial to the development of multicellular organisms. These microscopic machines serve a wide range of functionality—from transporting small molecules to catalyzing biochemical reactions. In recent years, advances in technology and knowledge of proteins have significantly progressed to the point where we can now create artificial proteins. The current project aims to optimize the functionality of a de novo protein known as mini-Fluorescence Activating Protein (mFAP), which stabilizes a small chromophore known as DFHBI, allowing it to fluoresce. We utilize the Rosetta molecular modeling software to develop a protocol that predicts which mutations increase mFAP-DFHBI brightness. From there, we can then run these predictions in molecular dynamic simulations and ultimately, experimentally test promising candidates that increase mFAP-DFHBI brightness. Our research provides many useful applications, for instance, mFAP-DFHBI complex can serve as a sensor or fluorescence-tagging tool in other disciplines.

QURA-TUL-AIN KHAN  
Wesleyan University

*Elucidating the Structure of the HU-Junction Complex*

HU, a histone-like protein, is one of the most abundant proteins in *Escherichia coli* and has significant roles in DNA packaging, recombination, replication, and repair. Previous studies have shown that HU binds with high affinity, in a non-sequence specific manner, to an important intermediate in recombination and repair, known as the Holliday or 4-Way Junction. HU binds to the Holliday junction with nanomolar affinity, suggesting that recognition of specific structural elements may help to facilitate the binding between the protein and DNA. Our research aims to elucidate the structure of the HU-J20 complex to clarify the structural elements that lead to HU recognition of the Holliday Junction. In our crystallography studies, an immobile Holliday junction with 20 base pairs per strand, referred to as J20, is used to reduce the flexibility of the construct. If diffraction quality crystals are obtained, X-ray crystallography can be used to visualize structural features of the protein-DNA complex and how HU binds to J20. To develop diffraction-quality crystals, we will screen conditions that promote crystal formation. Conditions will be optimized to produce crystals that lead to high resolution diffraction patterns. The crystallographic information furthers our understanding of how HU interacts with the Holliday junction as well as its other binding partners. Additionally, by understanding how HU binds to J20, we may be able to comprehend how other proteins bind to the 4-Way Junction. Overall, the goal of this project is to solve a piece of the puzzle in HU-junction interactions in the context of recombination.

## July 30, 2021 - 10:10 AM PDT Breakout 12: Communication, Economics, and Geography Poster Session D

KATHERINE HERNANDEZ

Loyola Marymount University

*The Distribution and Consumption of the Digital Other: The Portrayal of Spanish-speaking Cultures in Digital Media*

Netflix's globalization allows viewers the opportunity to participate in cross-cultural consumption of worldwide digital entertainment media. Latin America is Netflix's second biggest international market, producing twenty percent of its annual revenue—making Spanish content highly popular.

This project focused on the distribution and consumption of Netflix's Spanish television content to explore the implications of this cross-cultural media encounter. Making use of critical approaches to media studies and digital media in particular, this project consisted of two main parts: 1) Analysis of shows by genre produced by Spain and Mexico for distribution on Netflix, as these countries provide the most Spanish content on the platform. 2) A case study of television programming from Spain and Mexico that narrows the sample by focusing on two of the most popularly ranked shows on Netflix: Money Heist (2017-present) and Who Killed Sara (2021)? To analyze the portrayals of Spanish-speaking cultures in these shows, the project used the qualitative methodology of thematic analysis and employs critical theorist bell hooks' (1992/2011) ideas of cross-cultural media consumption outlined in her essay "Eating the Other: Desire and Resistance." By applying this method and theoretical approach to Spanish content on Netflix, this project tested the claim made by TV reviewers and media scholars that Netflix's international programming provides an opportunity to challenge American imperial dominance of global media. Preliminary conclusions indicated that while audiences take pleasure in consuming a "digital Other," European countries are associated with more credibility, prestige, and respect in the filming industry than Latin American productions.

JUSTIN SHRADER

University of Colorado, Denver

*Engaging Minority Populations In a COVID-19 Treatment Health Communication Campaign*

Deaths from COVID-19 disproportionately killed minorities across the United States when compared to non-Hispanic whites. In the past health communicators have worked closely with minority populations to find culturally relevant and effective way to inform a variety of health campaigns. The current study focuses on creating culturally relevant ways to educate minority populations in Colorado about a COVID-19 antibody treatment. To do this, two Community Engagement Studios (CES) were conducted composed of community leaders and members (n=7) to 1) help identify barriers and facilitators for minority communities in Colorado, and 2) how barriers can be overcome. The CES provided critical insight into barriers that were considered insurmountable by the target audience, creating easily understood language, and receiving feedback on visual elements. These findings provide specific and actionable suggestions for improving communication to increase awareness and use of COVID-19 antibody treatments. Future efforts will focus on evaluating the reach and effectiveness of the resulting communication campaign.

CHLOE PARSONS

University of Northern Colorado

[\*Food insecurity in an Anthropogenic Age: An Analysis into How Consumer Demand Will Shift during Crisis Events\*](#)

Consumers in the United States may need to adjust their food demand due to food insecurity caused by climate warming events. Research has focused on how climate change impacts food supply chains and distribution; however, there was little research on how consumers responded to these changes. This study analyzed how consumers across the United States responded to food insecurity caused by crisis events (i.e. pandemics and climate change), how consumers shifted from grocery store vendors to local food vendors, and if migration or food miles may increase based on potential food shortages. One study was initiated through survey and a one-factor, two-level between-subjects experimental design to assess perceptions of food insecurity and food purchasing behavior. Further, the survey was designed in Qualtrics and administered via Amazon Mechanical Turk and a regression analysis was run via SPSS. The study was targeted to people in urban and rural areas in the Midwest, South, East, and West regions of the United States. Furthermore, participants were selected between the ages of 18-65 and there was a sample size of 195 participants, of which were paid \$1.00 each. In this research, we hypothesized that consumers would shift their food purchasing from grocery stores to local vendors in light of crisis events. Furthermore, we hypothesized that this shift in market demand may encourage food miles. Both hypotheses were proven to be true in the study.

JAKOB COYKENDALL

University of Northern Colorado

[\*Exploring the Impacts of COVID-19 on LGBTQ+ Intimate Communication\*](#)

The question guiding this exploratory qualitative research study is, "How has the COVID-19 pandemic impacted LGBTQ+ intimate communication and relationships?" LGBTQ+ scholarship and research has become increasingly prevalent in the communication discipline. Recently, more scholars have demanded that communication scholarship be conducted through an intersectional lens that analyzes multiple dimensions of social identities including LGBTQ+ identities. Queer Theory poses questions around gender, sexual, and romantic identities that can help expand our understanding of different forms of intimate communication. "Queering" interpersonal communication research involves challenging traditional understandings of communication within identities such as sexuality and gender at the individual and structural levels. An additional aspect to this research involves the highly contagious nature of the COVID-19 virus that has drastically transformed how individuals socialize and has largely been unexplored within the communication discipline. This research project not only expands our understanding of how the COVID-19 pandemic has impacted LGBTQ+ intimate relationships and communication, but also proves valuable to Queering interpersonal communication scholarship. Data was collected through semi-structured one-on-one interviews with LGBTQ+ identified individuals in order to explore how the COVID-19 pandemic has impacted their intimate communication and relationships. Interviews were transcribed and coded thematically and inductively. The transcriptions were analyzed through an interpretive narrative approach to highlight individual lived experiences of LGBTQ+ community members. Preliminary results reflect the unique ways in which the LGBTQ+ community has been impacted by social isolation and developed resilience during the COVID-19 pandemic through maintaining relationships and a sense of community through digital communication.

BRIANNA MEBANE

Wesleyan University

[\*BLM in the Battleground: An Analysis of Racial Justice-Related Election Ads in Georgia\*](#)

The 2020-2021 Senate elections in Georgia proved to be an historic moment in politics, with the state electing its first pair of Democratic senators since 2005, one of whom was Georgia's first Black senator. In the midst of a year plagued with news of police-related deaths of people like George Floyd and Breonna Taylor, activists and organizers like Stacey Abrams and LaTosha Brown toiled to mobilize Black voters in Georgia, with their work helping to both elect Joe Biden and place Democrats in control of the Senate. The current study analyzes the creative text of Facebook ads run by both presidential and Georgia senatorial candidates to determine how they discussed racial justice during the 2020 election season. Using methods of structural topic modeling (STM) and keyword search, this research will add to the pre-existing field of political ad analysis, specifically as it pertains to how politicians engage with topics like race and racial justice.

## July 30, 2021 - 10:10 AM PDT Breakout 12: MIMG Poster Session E

NAYARITH JIMENEZ

Baylor University

*Growth and Expression of Diverse Saccharomyces cerevisiae Wild-Type and Nonsense-Mediated mRNA Decay Mutants on Nutritional V.S. Toxic Metals*

The nonsense-mediated mRNA decay pathway (NMD) is an mRNA degradation pathway in most eukaryotic organisms which allows for the rapid recognition and degradation of mRNAs that prematurely terminate translation. This includes mRNAs containing premature termination codons alongside natural mRNAs. Natural mRNAs, when regulated by NMD, encode fully functional proteins which carry out a variety of extensive cellular processes. One of these processes includes bio-metal homeostasis. To explore the significance of NMD regulation on bio-metal homeostasis, mRNAs involved in copper homeostasis and cadmium detoxification were examined, which are known to be sensitive to the NMD process. Although copper serves an essential physiological role as a coenzyme, excessive intracellular copper concentrations can be directly linked to cell toxicity. Additionally, although cadmium ions are known carcinogens, pollutants, and teratogens, little is known surrounding cadmium's underlying molecular mechanisms. Thus, to further understand the roles of both heavy metal ions on the NMD process, and therefore, on mRNA decay and gene expression, the growth rates and RNA expression rates of different strains of *Saccharomyces cerevisiae* were analyzed as they were cultured in a variety of environmental conditions. Through this, the effect of the presence or absence of these metal ions in relation to a functional NMD pathway was determined. It has been discovered that *Saccharomyces cerevisiae* strains from diverse genetic backgrounds respond differentially to environmental stimuli, and furthermore, that copper ions play a nutritional role, while cadmium ions play a toxic role, in the growth and expression of wild-type and NMD decay mutants.

CARTER SELLNER

University of Minnesota, Twin Cities

*Transcriptional vs Protein-Level Regulation of the Src-Family Kinase LynA and LynB*

Macrophages are specialized white blood cells, with roles in pathogen destruction. One of the key activators and regulators of this pro-inflammatory response is the src-family kinase (SFK) Lyn. Lyn exists in macrophages and other cells as two splice forms, LynA and LynB. Our lab used CRISPR/Cas9 gene editing to generate isoform-specific LynA knockout (KO) mice and LynBKO mice. Surprisingly, macrophages from both LynAKO and LynBKO mice showed higher levels of the remaining isoform. In addition, the levels of the other SFKs expressed in macrophages (Fyn, Fgr, or Hck) did not change, suggesting Lyn may have a unique regulatory mechanism that somehow senses the levels of the two isoforms. The goal of my summer research is to test whether this unknown regulatory system occurs in macrophages at the mRNA level or later at the protein level. Mouse cDNA and protein from LynAKO, LynBKO, and wild-type (WT) bone-marrow-derived macrophages (BMDMs) will be subjected to qRT-PCR and immunoblot analysis, respectively. qRT-PCR will be used to quantify the mRNA expression of LynA, total Lyn, and the E3 ubiquitin ligase c-Cbl. Results from these experiments will then be used to assess differences between mRNA and protein levels. Due to LynA being a selective target for protein degradation by c-Cbl, we expect there to be no differences in mRNA levels that would indicate this regulatory mechanism occurs post-transcriptionally, at the protein level. Because of Lyn's role in macrophage activation, understanding Lyn's regulatory mechanism will hopefully contribute to therapies aimed at decreasing inflammatory responses.

ROBERT ALLEN HALL

University of Wisconsin, Madison

*Genetic diversity and pattern of infection of Spiroplasma in the alpine ground beetle, Nebria ingens species complex*

Insect endosymbionts have been found in more than half of insect species. The roles these microorganisms play in their host could vary from parasitism to mutualism, but have not been well explored due to the high diversity of insects and their extremely heterogeneous life histories. In general, common endosymbionts, such as Wolbachia and Spiroplasma, could be beneficial to their host by increasing their longevity and the number of offspring, or by increasing the resistance of their hosts against other parasites such as nematodes. On the other hand, these endosymbionts could also cause male killing processes or post-mating cytoplasmic incompatibility in offspring, which could negatively impact the host population. Alpine environments are thought to be relatively harsh to resident species, with low temperatures and oxygen concentrations, limited resources, and high solar radiation. The adaptations of alpine insect species, and the nature of their ecological interactions with microbes, is therefore quite interesting. In this study, we aim to understand the role of Spiroplasma sp. NR, in their host, the Nebria ingens species complex, by scanning the prevalence of infection, genetic diversity, and associating the infection rate with environmental factors and physiological, morphological, and molecular characteristics of the beetles. The preliminary results show a relatively high (57%) and geographically widespread infection rate of Spiroplasma throughout the Nebria ingens species complex.

HELEN LEI

Wesleyan University

*Whole Genome Sequencing of Rhinichthys cataractae Using MinION*

Our lab focuses on evolution of aquatic organisms in fragmented habitats/landscapes. We are interested in anthropogenic and climatic effects on population-genetic structures of fishes. The Longnose dace, Rhinichthys cataractae, is a common inhabitant of riffle communities in Northeastern US streams. We require an aligned sequence of R. cataractae genome. Recent advances have dramatically expanded genome sequencing and analysis. Oxford Nanopore MinION, a 3rd generation technology, pulls DNA bases through nanoscopic pores, reading bases as they pass through from spectral reflectance of each nucleotide. After successful control experiments, we: extracted the DNA (checking its length, quantity and purity), prepared the library (repairing DNA ends), ligated motor proteins to DNA (SQK-LSK109), and loaded the DNA library into R9.4 and R10.1 flow cells. Genome assembly and alignment used Zebrafish, Danio Rerio, as the reference genome downloaded from the NCBI database. The D. Rerio genome is 1.42Gb arranged on 26 chromosomes. Sequencing used MinKNOW software. We utilized Guppy for high accuracy base calling after sequencing. Flye genome assembler, Medaka sequence polisher, and Guppy aligned the sequence up against the reference genome. We have three sequencing runs that yielded >14Gb of reads with N50>4Kb, and reads up to 50,000kb in length. The genome alignment will be discussed. The ability to sequence genomes of non-model organisms will elucidate the genetic basis of human and climatic impacts on the fishes in the wild. These findings will aid in future experiments about the genomic history of R. cataractae.

MOHAMMED ULLAH

Wesleyan University

*THE SYNTHESIS OF A LIGNIN DEPOLYMERIZATION DETECTION PROBE*

Lignin is an organic polymer that makes up a large portion of the world's biowaste. It is found linked to cellulose in plant cell walls and is a waste product of the pulp/paper industry. Although very abundant in the world, it is primarily used as a furnace fuel and converted directly into carbon dioxide. However, lignin can be broken down by fungal peroxidases, but the process is too slow to be considered a commercially feasible choice. Termites and wood-eating organisms have been shown to depolymerize lignin through the use of bacteria and enzymes in their digestive tract in a fast and efficient manner in comparison to fungal peroxidases. Since bioinformatic and other investigations have to date failed to identify which enzymes are responsible for the breakdown, further investigations are needed to identify these depolymerizing enzymes. We propose to synthesize an organic probe molecule containing a fluorophore and a quencher to detect the exact location of these lignin degradation enzymes within these organisms' digestive tract. In this 13-step synthesis, the creation of this lignin depolymerization detection probe will allow researchers to conduct in vivo experiments, which is anticipated to allow the development of lignin as alternative biomass for biofuel and fine chemical production.

## July 30, 2021 - 10:10 AM PDT Breakout 12: Neuroscience Poster Session F

MICHAEL MARTINEZ

University of Colorado, Denver

[\*Utilizing eye tracking to investigate the effects of interruptions on attention and performance\*](#)

Interruptions and distractions occur every day, and at times can be an inconvenience on one's ability to perform simple daily tasks. To investigate the influence distractions have on attention and performance, this study will utilize eye tracking to conduct an examination of auditory distractions during two different workload conditions. Evidence from Kanaan & Moachdiah (2021) suggest that interruptions lead to slower and more limited search of visual information directly after the interruption in a high-workload condition, resulting in lower mean saccade amplitude and higher mean fixation duration. While the interruptions in Kanaan & Moachdiah (2021) study were relevant to the task, our study will focus on irrelevant auditory distractions that occur during the task. Participants primary task will be to monitor a computer screen and detect subtle changes in shapes on the screen. Changes will be noted for the objects they are able to detect by pressing a button on a gamepad. There will be a high-workload condition (7-9 shapes) and a low-workload condition (3-5 shapes), as well as two distraction conditions comprised of trials with irrelevant auditory distractions and trials without auditory distraction. Eye movements will be examined across conditions. We hypothesize that the results will align with Kanaan & Moachdiah (2021), with a higher mean fixation duration and a lower mean saccade amplitude after an auditory distraction in the high-workload condition, even though the auditory information is completely task irrelevant in our experiment.

ZANE CRABTREE

University of Minnesota

[\*The Role of Caspase-2 Cleavage of Tau in Neurodegenerative Diseases\*](#)

The brains of patients with Alzheimer's disease (AD), Parkinson's Disease (PD), and related neurodegenerative diseases (NDD) often contain high levels of neurofibrillary tangles consisting of misfolded tau protein. Although these neurofibrillary tangles were previously believed to be the cause of neuronal dysfunction, recent work from our group instead suggests a truncated tau protein to be the main tau product involved in cognitive decline in NDD. This truncated tau species is present in higher levels in the brains of individuals with NDD and mice with cognitive impairment. The mechanism by which truncated tau is produced was previously unknown. Caspase-2 is a cellular protein involved in NMDAR mediated long-term depression (LTD). This work provides preliminary evidence that caspase-2 cleavage of tau underlies synaptic weakening in NDD. A mouse model was created with the aspartate at the cleavage site in tau changed to glutamate, rendering it uncleavable by caspase-2. Slice electrophysiology experiments indicate that caspase-2 cleavage of tau underlies normal and pathological LTD. Whole-cell patch-clamp experiments with cultured neurons containing the human APP gene show normalization of miniature excitatory postsynaptic current frequency and amplitude with the addition of the non-cleavable tau mutation. Our results indicate caspase-2 cleavage of tau is necessary for the accumulation of truncated tau product in neurons, and subsequently synaptic weakening.

NICHOLAS RIVEIRA

University of Texas at Austin

[\*Analysis of behavior-seizure correlates in a mouse epilepsy model\*](#)

Absence epilepsy is characterized by spike-and-wave discharges (SWD) in electroencephalographic (EEG) signals that correspond to cognitive and behavioral arrest in patients. Many studies have identified various physiological effects of absence epilepsy on human development, and pharmaceutical intervention has significantly improved the treatment of absence seizures. However, despite these advances there remains little understanding of mood and behavioral comorbidities commonly present in pediatric and adult patients with childhood-onset absence epilepsy. The Ank3 gene provides a unique opportunity to study these comorbidities, as it has been linked to mood disorders in human genetics studies and more recently to absence epilepsy in rodents. Thus, this study aims to identify unique event-related behavioral correlates in EEG signals of Ank3-knockout (KO) mice. Here, we take advantage of two supervised learning algorithms to identify SWD events from EEG recordings and to track the animals' movements from the video recordings. The kinematic information produced from the movement tracking was then used to estimate behavioral states (e.g., sleeping and walking) via a personally developed algorithm that was cross validated by a subset of videos manually scored by an observer. Power of EEG signals during these behavioral states was estimated for signal frequencies between 1 and 50 Hz using a Morlet wavelet transform. Preliminary results suggest that KO mice exhibited increased slow gamma (~30-40 Hz) power during sleep and walking compared to wildtype controls. Preliminary results also suggest that these increases in slow gamma correlated with Ank3 gene dosage and seizure phenotype severity.

YALISSA RODRIGUEZ

Wesleyan University

[\*Neurosteroidogenesis and Individual Differences in Vulnerability to Developing Escalated Alcohol Intake Following Chronic Social Defeat Stress\*](#)

Post-traumatic stress disorder (PTSD) is one of the most prevalent co-occurring psychiatric pathologies among individuals with alcohol use disorder (AUD). Although comorbidity worsens the symptoms and prognosis following treatment of both disorders, no approved compound has demonstrated efficacy to treat AUD comorbid with PTSD. GABAergic neurosteroids are altered by chronic alcohol and play a role in the stress and arousal systems degraded in PTSD. Particularly, dampened plasma levels of allopregnanolone are found in individuals with alcohol dependence or undergoing alcohol withdrawal and individuals with PTSD. Our goal was to establish an animal model to explore the role that neurosteroid levels have in predicting drinking or stress reactivity in individuals exposed to social defeat. Male and female CFW mice were trained to aggress C57BL/6J intruders. Intruder mice received ten social defeat experiences with sex-matched aggressors. Blood samples were taken following the first defeat. Following chronic social defeat, mice were given limited access to alcohol (20%, v/v) 3 hours a day for 14 days to assess changes in the escalation of binge drinking for intruder mice and non-stressed controls. After a withdrawal period, tissue was harvested to assess neuronal response to stress or acute alcohol, using c-Fos immunoreactivity. Behaviors and images were coded by experimenters blinded to treatment groups. Future work will determine if these mice show variability in the effect that chronic stress has on binge drinking behavior and whether this variability may be predicted by changes in circulating neurosteroid levels in both males and females experiencing chronic stress.

## July 30, 2021 - 10:10 AM PDT Breakout 12: Psychology and Cognitive Science Poster Session G

ADRIANA SANTOS

California State University, Stanislaus

[\*Racism Vs. COVID-19: What Causes more Anxiety?\*](#)

The year 2020 was quite an obstructive, challenging, year that has left many scared in different aspects of life from losing loved ones to permanently shutting down many businesses due to the COVID-19 global pandemic. However, another negative aspect was raging across the U.S.A: racism. Year 2020 was a peak year in racism as the Black Lives Matter movement started a global phenomenon against racism but unfortunately, this problem is still active along with COVID-19. My research is designed to examine the comparison of general anxiety levels created from racism and COVID-19 pandemic by comparing general anxiety levels with minority groups and non-minority groups. My participants will be Stanislaus state students from different races. To be a bit more specific, I will allow within demographics to be identified in their own group such as Latin/Hispanic. They will be asked questions to measure their anxiety levels. My analysis will be shown via an ANOVA test to differentiate the means between each variable. My results will show if whether or not one "disease" causes more anxiety than the other when also bringing into account race.

JASMIN SANCHEZ

University of Minnesota

[\*Associations among Critical Consciousness, discrimination, and physical and mental health during the COVID-19 pandemic\*](#)

Experiences of discrimination are linked with greater mental health concerns. Additionally, increased experiences of discrimination have been positively correlated with critical consciousness (CC), the process through which people become aware of the structure that maintains their status of marginalization and work toward ending said oppression (Freire, 1973; Watts et al., 1999, 2011). Research on CC focuses on its role in empowerment and liberation. However, research on the role CC plays in mediating the association between discrimination and symptoms of anxiety during the pandemic is scarce. The purpose of this study is to examine the relationship between discrimination, CC, physical health, and symptoms of depression and anxiety. We propose CC will mediate the associations between discrimination, physical health, and symptoms of anxiety and depression. This study draws from a 6-wave longitudinal study on wellbeing during the COVID-19 pandemic. This study uses data from waves 5 (February 2021) and 6 (April 2021). This study aims to see if 1) Worrying about discrimination in wave 5 will be related to physical and mental health in wave 6 among people of color (POC), 2) If CC in wave 6 will be related to physical and mental health in wave 6 among POC, and 3) If CC will at least partially explain the relationship between worrying about discrimination in wave 5 and physical/mental health in wave 6 among POC. Study participants included 442 staff and students from the University of Minnesota.



MARIA XIONG

University of Minnesota, Twin Cities

*Personal/Group Discrimination Discrepancy: Worry About Discrimination Among Asian Americans During COVID-19*

During the COVID-19 pandemic, Asian Americans experienced increased anti-Asian hate and violence. A 2020-2021 national report by Stop AAPI Hate found that there were 6,603 self-reported incidents of anti-Asian hate and violence in the United States. These experiences of discrimination were linked to more stress, anxiety, and depression (Stop AAPI Hate, 2021). The personal/group discrimination discrepancy (PGDD; Crosby, 1984) suggests that individuals within disadvantaged/marginalized groups tend to perceive a higher level of group-level discrimination than personal discrimination. Drawing from this framework, we will examine this discrepancy during a time where there are large amounts of discrimination against Asian Americans—the COVID-19 pandemic. We will also examine the degree to which worries about personal and group discrimination are associated with symptoms of depression and anxiety. The current study draws data from the COVID-19 Wellness Study, a longitudinal 6-wave survey which consists of faculty, staff, and students from the University of Minnesota. We will use Waves 5 (February 2021) and 6 (April 2021), which consists of 79 Asian American participants. We will examine 1) if Asian Americans report more worry about group discrimination than personal discrimination, 2) how worries about personal and group discrimination relate to mental health for Asian Americans, and 3) how worry about personal discrimination relates to mental health above and beyond worry about group discrimination for Asian Americans. To investigate these aims, we will examine correlations among these variables and conduct t-tests and regression analyses.

GENESIS GARCIA

Wesleyan University

*Gratitude and nostalgia among minority college students forming new relationships during the COVID-19 pandemic*

The COVID-19 pandemic has amplified socio-economic disparities in the U.S., with individuals from minority groups disproportionately affected (Hoyt et al., 2021). The purpose of the present longitudinal qualitative study (N = 32) was to assess the long-term psychosocial impact of the COVID-19 pandemic among a sample of first-year students (Class of 2024), from socio-demographic minority groups (e.g., race-ethnicity, sexual orientation, first-generation, low-income). The goal of the present study was to explore the perceived impact of the pandemic on students' ability to form new relationships among a random subset of participants (n = 10) following their first semester at university. Participants were recruited from a liberal arts university on the east coast, through social media and completed a brief online survey and a 50-minute interview. Responses to the question, "How has the COVID-19 pandemic affected your ability to form new relationships?" were analyzed using thematic analysis and revealed 3 main themes:

1. Gratitude for opportunities to connect with others
2. Nostalgia for face-to-face communication
3. Challenges with digital communication and online learning

Overall, students from socio-demographic minority groups expressed mixed feelings about their interpersonal adjustment during COVID. While there was evidence of gratitude for opportunities to connect online, students reportedly craved face-to-face interactions and some struggled to expand the diversity/breadth of their social networks amidst COVID-19 regulations. Understanding the long-term implications of interpersonal adjustment among students from diverse socio-demographic backgrounds will provide important information for developing effective interventions that support the optimal transition of minority students across university.

ANGE ZUNIGA-ALEMAN

Wesleyan University

*The Evolution of the Mormyrid Electric Fish Brain and Its Impact on Species Diversification*

Evolutionarily, changes in social behavior are associated with differences in neural circuitry. Weakly electric fish communicate using stereotyped brief pulses of electricity, distributed non-uniformly over time; called Electric Organ Discharges (EODs). In the Mormyrid family of weakly electric fish, species diversification has been correlated with coordinated changes in the extero-lateral nucleus (EL) of the electrocommunication pathway in the brain and in the social behaviors exhibited by these fish. Specifically, previous work has established evolutionary distinctions in EL (anterior/posterior) have been associated with differences in the detection of differences in EOD waveform. However, species differences in the time series of EODs and their coordination among groups larger than two have been less studied. Differences in the coordination of EODs over time are likely associated with evolutionary changes in brain regions other than EL, for instance the cerebellum or pallium.

In this study, we compare two distinct Mormyrid species that we have determined by visual observation to display qualitatively different social behavior: *Gnathonemus petersii* and *Brienomyrus brachyistius*. We focus on quantifying and describing their electrocommunication behavior when in pairs and when in larger groups. Additionally, we manipulate their social context to examine how it affects their communication behavior. Prior to data collection, extensive electrode testing was done to optimize the best signal to noise. Moreover, preliminary data collection confirms previous literary work specific to echo-response shape EOD waveforms. In future studies, we can then examine how the demands of different social behavior and communication are supported by associated neural circuits.

## July 30, 2021 - 12:00 PM PDT Breakout 13: Anthropology, Gender, and Ethnic Studies Panel A

RUBY GREENWOOD

Kent State University

[\*Assessing the needs of Congolese refugee women\*](#)

Refugees are people who have been forced out of their home countries to get away from war, persecution, or natural disasters. In 2016, many Congolese refugees came to America to escape war in their home country. Many of these refugees are women who come with their children. Transitioning to life in America for these Congolese refugee women was not easy. Many of them experienced language difficulties, acculturation, assimilation, poverty, depression, etc. This study explored the needs of Congolese refugee women after transitioning to living in America. Using a qualitative research design, 20 participants were interviewed. 20 semi-structured interviews were conducted. The interviews were coded and analyzed thematically. Major findings and themes within the answers were many refugee women needed bus tickets to get back and forth to places, money for things food stamps did not cover (soap, shampoo, etc), help finding a job that will accept their health conditions (back problems, swollen feet, swollen legs, etc), money for rent and buying houses, and help bringing relatives over to America.

ADRIANA VALDEZ

Our Lady of the Lake University

[\*Afro-Latinx Historical Representations in San Antonio\*](#)

Ariana Brown, a Black-Mexican San Antonian poet describes the complexities of her experiences of Afro-Latinidad stating, "I am descended from slaves. I want to know where I come from, but I can only trace my history in one direction—so I am here, in yet another Spanish class, desperately reaching for a language I hope will choose me back someday" ("Dear White Girl in my Spanish Class"). Afro-Latinx people like Brown navigate layered identities within racialized communities that are not immune to anti-black and anti-immigrant sentiments. Historically, Black and Latinx communities have been pitted against each other for limited resources in various areas including education and employment. These racialized experiences of discrimination and anti-blackness in the Latinx community are noticeable in public representations of Latinidad whereby whiteness is celebrated and preferred and blackness is obfuscated.

This paper is part of a larger project that seeks to understand representations of Afro-Latinidad at the San Antonio African American Community Archive and Museum, El Museo del Westside, and the San Antonio Museum of Art. This paper will provide a preliminary historical overview of literature that examines the complexities of Black-Latinx relations in Texas and how the perceptions of each other have impacted public representations of Afro-Latinidad. Through this research, I will create a local exhibit that seeks to ameliorate the misrepresentations and erasure of Blackness in the Latinx community and of Latinidad in predominantly Black spaces in order to create a bridge whereby the lived experiences of the Afro-Latinx community are celebrated and acknowledged.

JENNIFER NGUYEN BERNAL

University of California, Davis

*Capturing the Lived Experiences of Solidarity between Latinx/Chicanx and Southeast Asian Undocumented Students*

Communities of color share a history of colonization, oppression, and exploitation. American history has traditionally erased the narrative of communities of color, such as the Southeast Asian and Mexican undocumented communities. My research is informed by historical movements to understand the concept of solidarity where communities of color fight for the same cause, such as the Third World Liberation Front and the 2006 United States immigration reform protests. The purpose of my research is to explore the emerging solidarity between Latinx and Southeast Asian undocumented students at places like the AB540 and Undocumented center at UC Davis to gather their perspectives on the concept of solidarity. Through a narrative inquiry and testimonios methodological approach, I will be conducting recorded semi-structured interviews with open-ended questions. Implications of solidarity between undocumented communities of color lead to potential outcomes that will uplift future changes by mobilizing and organizing to advocate for their community's needs. These two communities are distinct from one another with a surface view of cultural difference but deal with parallel socioeconomic issues within American society despite the miscommunication and misunderstandings of one another's communities created by the dominant narrative. With America's increasing mass deportation force, understanding avenues of solidarity between the Latinx and Southeast Asian undocumented communities are essential to provide an understanding of how to sustain, strengthen, and improve upon their relationship in facing future hardships, which will contribute to the immense solidarity among communities of color, and allies.

## July 30, 2021 - 12:00 PM PDT Breakout 13: Arts and Multimedia Panel B

ROBERT WILLIS

Knox College

[\*Patterns in Context\*](#)

Since the discovery of the color spectrum by Isaac Newton, color has become directly associated with science. In colorimetry, colors can be measured and quantified using spectrophotometers which measure light in the amount of energy present at each wave. Studies and experiments have been done to scientifically explain colors, but colors produce other qualities and properties are more difficult to measure. In optic and cerebral perception, colors are rarely perceived as they physically are. Josef Albers explored the interaction of color and exposed how color perception relies on context as colors shift accordingly in various color environments. He observed how colors influence other colors depending on their hue and brightness. This presentation undertakes to build on Josef Albers' general assertions about color experience by introducing the complexity of colored pattern relationships. Specifically, examining the questions: (1) how colored patterns affect our perception of color relationships, (2) how it differs from the relationship and perception of solid colors, and (3) how solid colors influence neighboring patterns. Through exploratory experimentation, paintings, and graphic art were created to address the relativity of color behavior, and the optical complexity of colored patterns. This presentation offers personal interpretation and insight to the presenter's relationship with color and patterns. It is important to understand how various color combinations create different perceptions so that artists and art researchers can better be informed about the subjective properties of color.

NICK MORRISSEY

University of Wisconsin, Oshkosh

[\*On the Context and Implications of Mike Winkelmann\*](#)

Digital artist Mike Winkelmann, otherwise known as Beeple, has become one of the three most valuable living artists as of this year by selling an NFT of 5000 works at a Christie's auction in March. While the advent of NFT trading is the most obvious factor enabling such a historic sale, there are many other sociocultural factors at play in Winkelmann's success and practice in general. This project aims to describe and analyze these contexts along with the implications that the auction of EVERDAYS: THE FIRST 5000 DAYS may bring to the art world. Drawing on theories from aesthetics, cultural philosophy, and media ecology, the project examines a range of concepts, including digital ontology, post-internet, remix culture, and metamodernism, relating each one to Beeple's work in order to situate it within our cultural moment and generate predictions about future art trends.

JOSH ROBERTS

University of Wisconsin, Oshkosh

[\*Multiple Woodwinds Performance: History, Accessibility, and Curriculum.\*](#)

In today's current educational landscape, universities are creating many qualified individuals in overly specialized disciplines. This is leading to a highly saturated job market of qualified candidates with singular specialties competing for positions that demand a diverse skill set. Individuals are at an advantage to gain or obtain multiple skill sets to become more marketable. In the music industry, musicians need to diversify their skill sets to be competitive for performance and academic jobs. This often requires musicians to learn more instruments to enhance their performance output to fit in with various types of gigs. The biggest problem that the music industry and education system is seeing is consolidation. The modern musician has to market themselves within this changing landscape, and woodwind musicians benefit from learning the practices of multiple woodwind performance. The number of current undergraduate university programs in multiple woodwinds performance is miniscule in comparison to graduate level degrees. Through insights from experts in multiple woodwind performance and pedagogy, I have acquired available texts and other resources to understand the demands and expectations of the profession. I will also be practicing multiple woodwinds during this time to acquire first hand experience. This practice, resources, and other first hand accounts have aided me in forming a proposed curriculum at the undergraduate level for multiple woodwind performance. This proposed degree program will benefit university music departments and help students gain more accessibility after completion. This practice will set our future generations up for success in the highly competitive job market.

## July 30, 2021 - 12:00 PM PDT Breakout 13: Chemistry and Biochemistry Panel C

SEBASTIAN MARROQUIN

California State University, Long Beach

[\*Nanoscale Confinement of Liquified Gas Electrolytes in UiO-66\*](#)

Metal-Organic Frameworks (MOFs) are materials made of metal clusters and organic ligands that can be made to form one, two, or three-dimensional structures. By changing the metal ion, organic ligand, or the reaction conditions, the MOF can be altered for different applications, such as gas capture, drug delivery, and light harvesting. There is an increased interest in liquefying gas molecules for electrochemical devices that can function at low temperatures due to their low freezing point. By confining gas molecules in the nanoscale environment within the MOF can lead to dramatic changes of their physical and chemical properties. Carbon dioxide (CO<sub>2</sub>) and methane gas (CH<sub>4</sub>) are two types of greenhouse gases in the Earth's atmosphere and are heat trapping gases that hurt the ozone layer. By adsorbing these gases into the pores of our MOF we can help reduce the amount in the Earth's atmosphere.

In this work we will be using a computational approach to predict the phase transition (capillary condensation) conditions for CO<sub>2</sub> and CH<sub>4</sub> inside UiO66 (one type of MOFs) based on their diffusion properties. With the analyzation of the adsorbed molecule's dynamics inside MOFs, we will have better understanding for MOFs and confined-molecule properties, which provides insights for further studies.

VICTORIA DIAZ

California State University, Long Beach

[\*Metal-Organic Frameworks \(MOFs\) as Efficient Photocatalysts for Water Splitting\*](#)

The production of hydrogen fuel via water splitting will be critical for the large-scale utilization of intermittent renewable energy resources, such as solar power. In particular, visible light-photocatalysis to drive the decomposition of water into hydrogen and oxygen offers a direct route for the conversion of solar to chemical energy. Current methods for water splitting are not environmentally sustainable due to the use of expensive and rare metals as catalysts, and thus more efficient systems based on earth abundant materials are needed.

Metal-Organic Frameworks (MOFs) are promising candidates for photocatalytic water splitting that require further exploration to reach their full potential. The inorganic and organic building blocks of MOFs can be easily varied, which allows for the rational tuning of different MOF properties including pore size, surface area, and topology. It is this impressive tunability that makes MOFs attractive for the development of new photocatalysts. In this paper, we review recent critical advancements in this field and discuss the theoretical and practical requirements for MOFs to be used as photocatalysts for efficient water splitting. By highlighting optimization strategies and remaining challenges, we aim to create a template to guide future designs of improved photocatalytic MOF materials. While more research will be needed in order for photocatalytic MOFs to be successfully implemented for water splitting on an industrial scale, there are many potential opportunities to make important contributions to this field.

ALEXIS PALMA

University of Nevada, Reno

[\*Increasing the Efficiency of Transparent Solar Cells with Dynamic Windows based on Reversible Electrodeposition\*](#)

The global increase in energy demand has put an emphasis on the need for a transition to renewable energies. This transition is only achievable by developing technologies that are both innovative and cost effective. This project aims to increase the power conversion efficiency of transparent photovoltaics (TPVs) by coupling together dynamic windows based on reversible metal electrodeposition, offering electronically tunable transmission between clear and dark states. In the dynamic windows, I explored the use of polymer additives in a zinc electrolyte to increase the smoothness of the zinc electrodeposits and promote the reflectance of ultraviolet (UV) and near-infrared (NIR) light. UV and NIR light that reflects off the windows in their dark state will increase the efficiency of the TPVs by doubling the path length for light absorbance.

MATT FRISCH

University of Wisconsin, Oshkosh

*Finding the Origin of Crystalline Phase in UHMWPE and Calculating Percentage of Crystallinity*

Although most polymers are amorphous materials, some polymers like ultra-high molecular weight polyethylene (UHMWPE) have a mixture of crystalline and amorphous phases. In this presentation we will discuss the origin of crystalline phase in UHMWPE and we will present the method for calculating percentage of crystallinity using X-Ray diffraction (XRD) data. Although, it is known for long time that the origin of the crystalline phase is in the existence of lamellae, we will discuss how these lamellas are related to the XRD features. We will compare UHMWPE films to powders and we will discuss how selecting fitting function (Gaussian, Lorentzian, Voigt) affects the results.

## July 30, 2021 - 12:00 PM PDT Breakout 13: Clinical Medicine, Dentistry and Public Health Panel D

ALEJANDRA LEON

Boston College

[\*Prevalence of Type 2 Diabetes and Glycemic Control in Afro-Caribbean Population with Human Immunodeficiency Virus: systematic review and meta-analysis\*](#)

In the United States (US), over 10 percent of people with Human Immunodeficiency Virus develop type 2 diabetes, which is greater than 4 percent than in the general population. According to one study more than 12 percent of minority patients with HIV on antiretroviral medications develop type 2 diabetes. HIV treatment, particularly antiretroviral therapy, has been identified as an additional potential contributor to type 2 diabetes and poor glycemic control in patients with HIV. The primary aim of this systematic review and meta-analysis is to determine the prevalence of type 2 diabetes in Afro-Caribbean, particularly Haitian patients with HIV that subsequently develop type 2 diabetes. The second aim is to evaluate the effect of antiretroviral therapy in type 2 diabetes and glycemic control.

WENSI WU

University at Buffalo

[\*Interactions of COVID-19 Drug Candidates Dexamethasone and Baricitinib on Human Lymphocyte Proliferation\*](#)

A hyperinflammatory response to severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection, featured by the activation of lymphocytes and systemic cytokine release syndrome, has been implicated in the pathophysiology of acute respiratory distress syndrome (ARDS) and organ damage in patients with COVID-19. Dexamethasone (DEX), a synthetic glucocorticoid, has shown benefits for COVID-19 patients with ARDS owing to its potent immunosuppressive and anti-inflammatory properties. Baricitinib is a selective Janus Kinase (JAK) inhibitor that interrupts the signaling of multiple cytokines implicated in COVID-19 immunopathology through the JAK/signal transducers and activators of transcription (STAT) pathway. It may also have antiviral effects by preventing SARS-CoV-2 from entering and infecting lung cells. The immunosuppressive and antiviral effects of baricitinib have made it a promising candidate for COVID-19 management. Both DEX and baricitinib exert marked immunosuppressive effects and are drug candidates in the treatment of COVID-19 patients. Lymphocyte proliferation is a major factor determining the magnitude of immune response. The study aims to explore the single and combined anti-proliferative action of DEX and baricitinib on lymphocytes. It was hypothesized that the combination of DEX and baricitinib may produce additive or even synergistic immunosuppressive effects that may provide more benefits for COVID-19 treatment.

ABRAHAM SOTO

University of California, Santa Barbara

[\*The Value of the Rapid Diagnostic Test for Malaria Epidemiology\*](#)

In Africa, the leading causative agent of malaria is *Plasmodium falciparum*, which accounts for over 90% of infections. However, some regions in Africa, such as the Southern Province in Zambia, have made significant progress in reducing the burden of malaria. This reduction can be credited to the development and introduction of the rapid diagnostic test (RDT). RDTs have revolutionized the diagnosis of malaria— these tests now make diagnosis a quick, simple, and accessible process for rural communities in Zambia. The RDT also provides epidemiologists with weekly real time data that can be used for intervention strategies depending on the ecology and epidemiology of malaria in the region. In this review, the benefits and limitations of the RDT will be discussed in terms of its contributions to reductions in malaria, specifically of *Plasmodium falciparum*, in the different ecological areas of the Southern Province in Zambia. Ultimately, highlighting the value and use of the RDT in Zambia will demonstrate its potential as a tool for other countries fighting malaria.



## July 30, 2021 - 12:00 PM PDT Breakout 13: Education Panel E

TAYJUA HINES

Kent State University

[\*Social Justice for Black Children Within Early Childhood Education\*](#)

Most early childhood education programs were originally designed to help close the school readiness gap between children from more affluent backgrounds and those from low-income and economically marginalized backgrounds. Early childhood education is a program that serves young children between 3-5 years old. Targeting children's most critical learning years may assist in advancing later academic and social-emotional skills. Unfortunately, high-quality early childhood education in the U.S. is minimally accessible for Black children, when accessible more than half of those preschools only offer part-day schooling while less than 50% offer full day and less than 20% offer both. Sixteen percent of preschools serve children from marginalized backgrounds and another 25% align their services with low-income families. Access to early childhood education programs is impacted by racial disparities in out-of-school discipline that start in the very early stages and trickle throughout the formal years of education. For example, Black children in the preschool system, only make up 18% of enrollment yet represent 48% of preschools who are suspended multiple times. Eleven percent of Black students are suspended 3 times more than their white counterparts yet they make up less of preschool enrollment and Black girls are suspended at higher rates than any of their other racial counterparts. Data states that students who are in the juvenile justice system more than likely have been suspended or expelled and students who experience out-of-school suspension and expulsion are up to 10 times more likely to drop out of high school than their counterparts.

KENDRICK HENSON

The University of Texas at Austin

[\*More Than an Extra-Curricular: An Exploration of HBCU Marching Bands and Their Role in Shaping Minority Students Academic Success\*](#)

Music is a foundational piece of African American culture, and this key cultural component is no exception within the realm of higher education. Historically Black Colleges and Universities across the country have redefined and revolutionized what marching bands look and sound like. Marching bands at HBCUs have played a key role in the culture of these college campuses, but they are more than just a source of culture. Although the cultural context of these marching bands are beyond exceptional, they also play a large role in developing minority students' academic success, personal growth, and professional development. This study uses a semi-structured interview approach in order to explore the depth of participants' experience within their respective HBCU marching band programs. By exploring the effect marching bands at HBCUs have on their students, we will be able to understand how to provide culturally relevant pedagogy that goes beyond the traditional classroom environment.

MINHAL HANIF

University of California, Davis

[\*A Multi-Method Analysis of Black Educators' Perspectives on Black Childrens' Needs For School Success\*](#)

A variety of factors and agents, including teachers, influence children's academic achievement. This multi-method study explores the diversity of perspectives among Black educators regarding what they believe Black students need to be successful in school. The data are derived from a cross-sectional survey study on the diverse identities, experiences, and pedagogical views of Black educators in the United States. Educators (N=238) who self-identified as Black or African American provided survey responses on their demographic backgrounds, teacher education experiences, and attitudes toward teaching. They also responded to an open-ended question, which is the focus of this study: "What do African American/Black children need in order to be successful in school today? Please explain." We conducted a thematic open coding analysis of the open-ended responses. Our analysis showed overarching themes of social, institutional, and emotional support as key factors in the academic success of Black students. Additionally, we present patterns in the open-ended data based on quantitative data—the educators' demographics (e.g., gender, birth cohort), teacher education backgrounds (e.g., Historically Black College or University graduate vs. not) and attitudes, and teaching contexts (e.g., urban vs. not). The findings help to illuminate the kinds of support Black educators believe Black students need to be successful in school today, which may be utilized to inform educators, policymakers, parents, and others in future decision-making around children's academic pathways, laws, and policies.

## July 30, 2021 - 12:00 PM PDT Breakout 13: Education Panel F

DEBORAH AMPONSAH

Boston College

[\*WIC Participation and the Early Socioemotional Development of Children of Color\*](#)

Research shows that the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) offers healthy outcomes for children such as positive cognitive development and increased nutritional intake (Jackson, 2014; Zimmerman et al., 2020). However, there is less information surrounding the correlation between children in WIC and their socioemotional development (Arons et al., 2016). There is even less research surrounding the implications of the program for children of color, as a majority of children enrolled in WIC are racially white (Thorn et al., 2018).

This study seeks to understand early education educators and professionals' perceived influence of WIC on the socioemotional development of children of color in a classroom setting. The study used a mixed methods research design to conduct data collection from participants.

HECTOR SOSA

University at Buffalo

[\*Computer Science Courses and Outcomes in NYC Public Schools: Focusing on the demographics of students\*](#)

In 2016, the Department of Education in New York City, mandated that public schools report computer science education. Meaning that schools will have to report the number of computer science courses offered and the number of staff able to teach such courses, if any. The purpose of this study is to discover if there is any correlation between whether a school offers computer science courses and the demographics of the students, as well as looking at how offering computer science courses influences graduation rates or dropout rates of students in the school. To be included in this study, these schools must include 9th-12th grade, however, there are some schools that offer elementary and/or middle school education. I hypothesize that schools that offer computer science courses will have higher graduation rates and lower dropout rates than schools that do not offer computer science courses. Additionally, I hypothesize that the schools that offer more computer science courses will be correlated with a lower economic need of students enrolled in the school.

RESHMIKA SINGH

University of California, Davis

[\*Language, notation & meaning: Children's articulation of their emergent fraction ideas\*](#)

This research will focus on children's use of academic language when discussing fractions while solving equal sharing problems. It is also focused on their mathematical thinking related to fractions. An understanding of fractions is important to lay a foundation for students to understand more advanced mathematical concepts. Research indicates that if fractions are to be learnt from a deeper understanding, equal sharing problems can serve as a strong foundation. In order to conduct this research, we will be analyzing the mathematical language used by 3 to 10 third- fifth graders (ages 10 to 12) in interview contexts. The aim is to see how children use language to express their interpretations of fractions. The hypothesis is that children tend to be imprecise when talking about fractions which can lead to misconceptions. This analysis is intended to provide teachers with examples to consider so they can do a better job of supporting students in learning the language and concepts of fractions.

## July 30, 2021 - 12:00 PM PDT Breakout 13: Psychology and Cognitive Science Panel G

JONNA BARCELONA

California State University, Long Beach

[\*Accessibility and Availability of Mental Health Services for Ethnic Minority Youth with Depression\*](#)

Objective: A disparity exists in access and availability of mental health services for ethnic minority youth experiencing depression. This literature review focuses on identifying mental health services and the level of access available to ethnic minority youths. Method: A literature search was performed using research databases, PubMed and PsychINFO; keywords used as search terms included: depression, ethnic minority, youth, access, mental health services, and resources. Results: The literature search identified 12 research articles, of which 10 met inclusion criteria (e.g., focused on the targeted population of ethnic minority children and adolescents). Review and summary of the articles indicated that ethnic minority youth often do not receive quality treatment. Compared to their white counterparts, ethnic minority children and adolescents are more likely to forgo seeking mental health services due to stigma or skepticism regarding the importance of mental health. School-based and family-based interventions show effectiveness in better mental health treatments for minority youth. Conclusion: Improving access to mental healthcare services may benefit depressed ethnic minority youth by reducing disparities in their level of care. Possible methods of improving access/availability may include adjusting policies and regulations that increase eligibility to receive quality treatment. It is worth noting that there is a lack of studies focused on this population, limiting findings for this literature review.

GABRIELLA HILL

Purdue University Northwest

[\*Therapeutic Horticulture in the United States: A Review\*](#)

The origins of horticultural therapy stem from traditional indigenous wisdom. But, in modern ways of living, specifically Western cultures, people have lost the connectedness with nature that is revered in Indigenous wisdom. The growing popularity of horticultural therapy seeks to repair this connection for positive mental health outcomes. One of the main types of horticulture therapy that has become quite common is community gardening. This study seeks to investigate the amount and empirical rigor of research on community gardening and horticultural therapy on mental health in the United States. This is a nonexperimental, systematic review of existing literature published in the United States on horticulture therapy and their research designs (quantitative or qualitative), and philosophies. It is hypothesized that studies in the United States may reflect the inequalities of access to horticultural therapy versus community gardens. Additional findings will be examined and discussed.

BARBARA SANCHEZ

San Jose State University

[\*Postpartum Depression in Minority Communities and the Barriers to Treatment\*](#)

Postpartum depression can be described as a hormonal imbalance that occurs after a woman gives birth. The placenta carries thousands of estrogen hormones in it that once removed after childbirth, there is an extreme imbalance of hormones in the mother's body. This leads to mood swings, sadness, loss of interest, etc. Postpartum depression is extremely common for women, especially in minority communities (Winstone, 2020). If this can occur in the majority of women at almost 80% of the female population after giving birth, then why is this viewed as shameful and controversial? After researching Postpartum depression, I found that the majority of minority women feel ashamed to come forward when experiencing this form of depression. The reason being is that they are "mom-shamed" because this depression makes them feel disconnected from their baby and not experience the joy that mothers are often said is supposed to be feeling. This study will look for the answers as to why minority women do not receive treatment for this form of depression and do not come forward with reporting it to their doctor/ healthcare provider.

KYANA HAMILTON

Westminster College

*Mental Health Accessibility For Incarcerated Women with Post-Traumatic Stress Disorder*

Though there has been a steady decrease in violent crimes by women since the late 1980s, mass incarceration of black females has been on the rise. Through legislation and carceral punishment, the “war on drugs” created during the Nixon administration perpetuated racial violence against Black women with mental health disorders.

Furthermore, with the deinstitutionalization of mental health facilities for individuals suffering from mental health disorders, prisons have become the leading institution of care for mental health patients. In 2019, the imprisonment rate for Black women was over 1.7 times the rate of imprisonment for white women; Black women are also more likely to have undiagnosed and untreated mental health issues, which may contribute to higher recidivism rates (Hahm et al., 2015; Zeng, 2020). This study will explore the efficacy of dialectical-behavioral therapy (DBT) for incarcerated Black females with post-traumatic stress disorder (PTSD). The study will consist of a randomized controlled sample of 30 women inmates at Central Utah Correctional Facility (CUCF) in Gunnison, Utah with symptoms of PTSD: half will receive DBT treatment and the other half will receive traditional talk therapy.

Participants will participate in a sixteen-week treatment program, plus three months of follow-up studies upon release, to determine the effectiveness of the treatment programs in reducing recidivism rates for black female inmates with PTSD at CUCF.

## July 30, 2021 - 12:00 PM PDT Breakout 13: Sociology and Public Affairs Panel H

DARIUS ROBINSON

Purdue University Northwest

[\*The Effect of COVID-19 Virus on Low-Income Communities & How Conditions Widened the Inequality Gap\*](#)

This research paper examines the impact of the coronavirus disease in the low-income communities located in Chicago, IL. The COVID-19 pandemic has been a drastic tragedy to all of mankind across the world. During this time, the disease has presented complex disengagement in people's lives and caused certain communities to have inequalities through education, occupation, and financial difficulties. In this research, readers will be able to use the United States Census Bureau Household Pulse Survey Data, data samples from the Supplemental Nutrition Assistance Program, known as SNAP, and interviews from people that have been impacted by COVID-19 to conclude how the coronavirus disease created conditions that widened the inequality gap. There are maps which detail essential workers households and states that many essential workers reside in lower-income neighborhoods. Trends reveal the disadvantage in some areas are caused by the historical effects of segregation and discrimination in Chicago.

On the other hand, affordable housing in Chicago before the COVID-19 pandemic started was difficult to locate. Low-income families have been using more than fifty percent of their income on rental properties, which cost many renters to decipher between food, healthcare, and rent. You can imagine for a household family that is having a problem with making rent payments monthly might have to make unmanageable choices between paying for childcare, medicine, schooling due to their loss of an occupation because of the coronavirus disease pandemic.

JAMILETH RODRIGUEZ

University of California, Santa Barbara

[\*The Voices of Essential Migrant Workers During the COVID-19 Pandemic\*](#)

During the COVID-19 pandemic, migrant workers became "essential" overnight. For migrant essential workers, it is important to understand how migrant status and often low socioeconomic status has unique challenges for our understanding of how the COVID-19 pandemic impacts this group. In order to better understand their daily struggle, this exploratory study aims to document the experiences of migrant "essential" workers during the COVID-19 pandemic. Semi-structured interviews were conducted with migrant "essential" workers within a local county. Preliminary themes that emerged are the lack of financial support, increase in mental health struggles, and the concern of infecting their family members. Findings will provide a better understanding of the communities' vulnerabilities and experiences to address policy health, health inequities, and impact on migrant essential workers' mental and physical health as a result of the COVID-19 pandemic. This knowledge will contribute to efforts in public health and health equity towards migrant health to fulfill gaps in health disparities and access to resources.

NAJMA ABDI

University of Washington

*Understanding and Addressing Barriers to COVID-19 Testing in the Somali community in King County, WA: A Community-Driven Strategy*

Immigrant and refugee communities are disproportionately impacted by COVID-19 due to pre-existing social and health disparities. Communities with limited English proficiency have elevated rates of hospitalization particularly in Washington state. King County has limited knowledge of community testing needs due to the lack of disaggregated data. Our team has collaborated with the Somali Health Board (SHB) to explore the barriers to COVID-19 testing within the King County Somali Community, where approximately 30,000 Somali immigrants reside. We administered anonymous surveys to Somali and non-Somali participants aged  $\geq 18$  (n=540) at testing fairs in South King County and recruited through community outreach. Survey data were used to quantitatively determine prevalence and correlates of timely COVID-19 testing within the King County Somali Community (defined as testing within 2 days of symptom onset). We conducted in-depth interviews with healthcare workers (n=5) and policymakers (n=5) to qualitatively explore the barriers and facilitators of testing in the community. We hosted two virtual focus group discussions -- one female-identifying group (n=10) and one male-identifying group (n=10) -- with members from the Somali community to gather personal experiences of COVID-19 testing barriers and concerns. Our preliminary results suggest that there is a trend towards longer time from symptom onset to test for Somali respondents and that Somali respondents face various barriers to testing ranging from misinformation to transportation. Our findings help identify community barriers to COVID-19 testing and how they can be adequately mitigated to improve access and promote equity in King County's pandemic response.

DEQA MUMIN

University of Washington

*Power Analysis: BIPOC Health Services & Systems Accountability in King County*

Due to capitalist and racially motivated social structures that uphold white supremacy, resources are not adequately distributed to Black, Brown and marginalized communities. These systems maximize profits by maintaining power hierarchies between leadership boards and communities, subordinating those that are not represented in positions of power. We must increase funding for these marginalized communities' health services and systems accountability. The Tubman Center aims to establish a new funding system for healthcare organizations that restores power to historically marginalized communities. Our study investigates how power hierarchies are represented in funding distribution to identify which funding practices must be disrupted to build a healthcare model that promotes the health of its constituency groups. We gathered information from government and community websites, and carried out interviews with Seattle Council members and a Washington State Representative to gain further insight on power hierarchies in our health system. Using a Power Analysis grid, we placed researched entities, organizations, and influential people in relation to each other; the x-axis corresponds to entities' inclination towards our agenda or the opposing agenda, while the y-axis corresponds to how influential an entity is and their power to influence healthcare policies. Our findings reveal a complex system where money is distributed based on the agendas of larger businesses and corporations. Additionally, we found gaps in information for where funding originates and the process by which money is allocated. One recommendation for future research would be to incorporate more community voices to create Power Analysis Grids for other public health systems.

## July 30, 2021 - 1:10 PM PDT Breakout 14: Anthropology, Gender, and Ethnic Studies Panel A

JENIKA SCOTT

Rutgers University

[\*Teenage Problematic Sexual Behaviors\*](#)

Teenage Problematic Sexual Behaviors (PSBs) are developmentally inappropriate or intrusive sexual acts that typically involve coercion or distress among 42-73% of children by 13 (Silovsky 2002; Kellogg 2010). It is sexual behaviors that either occur frequently or much earlier than culturally or developmentally expected or appropriate. However, many assume that children who engage in these problematic behaviors are victims or survivors of trauma, abuse, or psychological defect. Research has found that between  $\frac{1}{3}$ - $\frac{1}{2}$  of children diagnosed with PSBs and were admitted to an agency for treatment had no history of sexual abuse' (National Center on the Sexual Behavior of Youth, 2021).

This research seeks to explore the social factors that may influence a teenager to engage in PSBs and how they may cause a child/teenager to recidivate. Social factors are often regarded as the things that affect a person's lifestyle. Here it is defined as "the general factors concerned with the social structures and processes that impinge on an individual" (Gellman & Turner 2013)—utilizing 30 clinicians, therapists, and experts working with youths diagnosed with PSBs from a Delphi study conducted by Dr. Duron. Data collected from a Qualtrics survey will shed light on the social challenges, needs, and protective factors associated with problematic teenage behaviors. The data gathered will assess the impact social factors can have on a child or teenager's life and their role in influencing a teenager to engage in Problematic Sexual Behaviors, and how they can cause a teenager to recidivate once diagnosed and begin treatment.

JESSICA CUENCO

University of California, Davis

[\*A Qualitative Case Study of Filipinx Students' Maturation of Sex and Sexuality\*](#)

Previous research has shown that a measurable percentage of undergraduate students enter university without an adequate foundation in sexual health education. BIPOC students are disproportionately affected by a lack of a mandated curriculum on preventing pregnancy, abuse, LGBTQI+ discrimination, and STI transmissions. Specifically, Filipinx-identified students have the highest adolescent pregnancy rate in the Asian Americans and Pacific Islanders (AAPI) community. Furthermore, according to the CDC, Filipinx American mothers obtain the lowest average of higher education degrees in the Asian Diaspora. This qualitative case study collects Filipinx-identified university students to voice their transnational perspectives on their experiences and current knowledge of sex and sexuality. Data was collected by individually interviewing 10 participants in one-on-one meetings, asking the same set of seven questions. These students dissect how school, culture, religion, and ethical factors within the Filipinx diaspora may influence their maturation. Through their answers, initial findings suggest a disconnect between Filipinx students and their families regarding sex. Students stated that parent-adolescent communication about sex has negative impacts on mental health. Furthermore, students reported using resources outside of schools and households to find information on sexual health. This research attempts to bring awareness to sex education inequity and promote healing and liberation within the Filipinx community.

STEPHANIE MARTINEZ

University of California, Los Angeles

*Mesoamerican Sex Work: From Ahuiani to Puta*

This research examines sex work in Mexico during the prequest and colonial periods. I will conduct this research by analyzing how the topic is addressed in sources such as the Florentine Codex and other manuscripts produced by Indigenous artists/writers in the 16th century, as well as archival records generated by the colonial legal system and texts written by Spaniards. Few scholars have sought to understand how Indigenous and Spanish traditions of sex work converged in this period.

In prequest Mexico, Nahuas used the term *ahuiani* to refer to a woman who “pleasured” others with her company and sexuality. The Nahuatl peoples of central Mexico, including the Mexica or Aztecs (Aztecs), understood laughter, intoxication and sex as “earthly pleasures.” But the Spaniards who arrived in Mexico and the many priests who followed them, transformed the profession of the *ahuiani* into the evil *puta*.

The *ahuiani* played important roles as pleasure givers, dancers in celebrations, and companions to warriors. I contend that Eurocentric notions of the *puta* or whore disregarded many of these roles. Despite the impact of Christian and patriarchal attitudes toward women who offered companionship and sex, the archival record suggests that sex workers continued to perform at all social levels in colonial Mexico, despite laws and doctrine designed to punish them. My project examines this history of women and sexuality in colonial Mexico, the most populous region of the Americas in this period.



## July 30, 2021 - 1:10 PM PDT Breakout 14: Education Panel B

EMILY HALE

Baylor University

*Supporting Culturally and Linguistically Diverse Learners: Implementing Culturally Relevant Pedagogy and Response to Intervention*

Identifying a student as culturally and linguistically diverse (CLD) is to categorize them under an umbrella term that encompasses students from a variety of backgrounds. Culturally, this can include students who practice unique customs and traditions that distinguish them as a minority from their peers. Linguistically, this can include those who are raised in non-English or limited-English speaking households. The students that are identified as CLD are disproportionately represented in the population of students receiving special education services in the U.S. public education system. The disproportional representation has many contributing factors; each will be analyzed and addressed in this paper. In consideration of this disproportionality, practices such as the implementation of Response to Intervention (RTI) and culturally relevant pedagogy (CRP) may prove to be most effective when used in conjunction with one another. In this review, I will examine relevant literature involving RTI and CRP within the realm of special education in order to investigate the adequate level of support that is needed to provide special education services to a CLD student. I hypothesize that the results from this review will prove the necessity of providing each student with a free appropriate public education (FAPE) through the use of RTI and CRP.

KELSEY MAE BEERS

Rochester Institute of Technology

*Dialogic Reading: Early Literacy Intervention*

School aged children find most of their academic success through their early literacy skills. This increases the need for effective early literacy interventions such as co-reading and reading skills. Previously it was theorized that socioeconomic status and access to resources was a major indicator of literacy. Looking forward it is suggested that parent-child interaction and reading is more effective when looking at literacy and vocabulary development. During this summer experience, executive functioning videos will be coded as a control group to see how parents will read to their children when put in a lab setting. Compared to the other group which includes three separate sessions and dialogic reading interventions. Research Question: Does dialogic reading instruction assist parents in becoming more skilled co-readers?

ALEXZANDRA ROMAN

The University of Texas at Austin

*How Can Secondary English and U.S. History Teachers Understanding Ethnic Studies as a way to Combat Curriculum Violence Towards Students of Color?*

Providing every child with an equitable opportunity to learn has been a continuous challenge in education. According to previous literature, the curriculum in our K-12 classrooms teaches a set of ideas and principles that centers a white majority, enacting violence through acts of erasure, assimilation techniques etc. As a result of this violence, my research will survey the range of literature that shows how the white-majority curriculum enacts violence and provide the implementation and incorporation of Ethnic Studies and an intervention. The central question of my research asks, "How can secondary English and U.S. History teachers understand Ethnic Studies as a way to combat curriculum violence towards students of color?" To answer this, my research gathers data from interviews with current secondary English and U.S. History teachers. During these interviews, I will use a qualitative approach as I pose questions to generate whether the participants' understand the curriculum as violent, and if so, what they think of Ethnic Studies as an intervention. I anticipate that my results will first, offer insight into what teachers think in a post-Trump era, especially as it pertains to the evolution of Ethnic Studies. Next, this research will inform curricular development as it will provide a solution to the violent curriculum, and lastly, provide support for an Ethnic Studies centered curriculum in the classroom, reconstructing public school education as we know it. Given these findings, the implications of my research look to give credence to the incorporation of Ethnic Studies into K-12 curricula.

## July 30, 2021 - 1:10 PM PDT Breakout 14: Humanities Panel C

OXALA DA SILVA

California State University, San Marcos

[\*A critical analysis of Big Latto's identity negotiation\*](#)

This research examines the definition of being Black within Black spaces, particularly within rap culture. Alyssa Michelle Stephens is an American female rapper that formerly went by the stage name Mulatto. Historically, mulatto has been used to label people who were half Black, half White. At the time of her first television appearance, Stephens stated that her use of this stage name was to serve as a representation of her mixed background, her mother being White and her father being Black. She was met with backlash through the use of this word deemed "derogatory." Relying on scholarship on pop culture and Black women's representations, this study critically analyzes Stephens' identity negotiation through her reclaiming of the name "Mulatto." Using a variety of cultural artifacts (e.g., social media, music videos, interviews, etc.), our analysis demonstrates how her embodiment of the label "Mulatto" illustrates the complexity of mixed-race identity politics with regard to the social construction of Blackness within the rap culture. We argue that through her conscious recognition of being mixed, critics felt as if Stephens was not claiming or wanting of her Black half, but rather capitalizing socially and economically on colorism and featurism to appeal to Whiteness. Along with that, her reclaiming of the label "Mulatto" could also be a way to desensitize the social construction of Blackness within rap culture by publicly attempting to fully embrace her mixed-race identity. Ultimately, this becomes a turning moment of redefining Blackness within American culture, and particularly rap culture.

INDIGO HINOJOS

University of Nevada, Reno

[\*Women's Centers in Higher Education: An Oral History of the UNR Women's Resource Center Closure and Failed Reinstatement\*](#)

In 1987 there were approximately 2,500 women centers within the United States, however, as of 2019, there are now only around 400. Administrators on college campuses are closing women and gender centers at a rapid pace, despite evidence that women and gender centers are empowering resources and helping female students become leaders on their campus and within the community. With these closures, feminist scholars must look at the administrative logic, policy, and discourse to understand this spatial erasure. Drawing from gender, feminist, critical race, identity studies, and the use of archival research and interviews, this study examines the possibilities of publicly engaged research. First, I bring into question and analyze the shutting down and the failed reinstatements of the UNR Women's Resource Center. Second, if the interviewees consented to having their stories shared as part of an effort to highlight the experiences of women in Nevada, they will contribute to the UNR Special Collections Digital Archives. By collecting these interviews future scholars researching women in Nevada, on campus, or the closure of these centers will have access to first-hand experiences. The findings of the archival research suggest that there is a connection between the Nevada System of Higher Education's allocation of UNR's budget and UNR's closure of the Women's Resource Center.

MYKIE VALENZUELA

University of Utah

[\*We Are What We Read: The Problem of Representation on Undergraduate Philosophy Syllabi\*](#)

Academic Philosophy suffers from what's been called a "demographic problem." In 2018, only 1% of full-time philosophy professors in the US were black and women professors totaled just 17%. Progress in recruiting underrepresented groups has lagged far behind other humanities disciplines, particularly in race and gender. I hypothesize, given that undergraduate syllabi contain texts predominantly written by white and male philosophers that students from underrepresented groups are less likely to major in philosophy. I am testing this theory using several years of syllabi records from the University of Utah Department of Philosophy. Using the Simpson's Diversity Index, based on assigned readings, each syllabus is given a score that illustrates how representative of the different identities of philosophers and authors. For example, if a syllabus only includes authors with the same identity, this would score a 0. This pilot study will analyze the average scores by semester and year to create a longitudinal comparison. I expect the diversity of authors for assigned readings included in philosophy syllabi will correspond to the diversity of undergraduates in the major. This novel research study will add to the literature that supports diversifying the philosophical canon.

JENESSA JIMOH

Westminster College

*Factors that Facilitate or Impede Black-White Interracial Marriage Pairings*

Black-White interracial marriage pairings are a very small portion of the marriage pairings that occur across all races. I believe that the racial history between Black and White individuals and the current racial stereotypes and forms of systemic oppression that exist discourage Black and White individuals from marrying interracially. This research seeks to understand the racial dynamics of Black-White interracial marriages through an analysis of location and propinquity; gender; and racial identity development. I will analyze these three points to determine how each aspect impedes or facilitates the occurrences of Black-White interracial marriages. My two hypotheses are:

- 1) In Black-White marriages involving White men and Black women, both spouses will have fully accepted their racial identity; therefore, conversations about race, gender, and location will play a pivotal role in their relationship;
- 2) In Black-White marriages involving White women and Black men, the Black man is less likely to make race a defining component of their marriage, thus neither will his White spouse; and conversations about race, gender, and location will not play a major role in their relationship.

I will test these points of analysis through conducting semi-structured interviews with 12 interracial couples residing in Utah and Virginia. I will use the snow-ball method of sampling to collect participants. Furthermore, I will use an ethnographic approach to analyze each person's response to my interview questions to connect them to my three points of analysis in hopes of determining how these factors affect Black-White marriages, specifically, when compared to monoracial marriages.

## July 30, 2021 - 1:10 PM PDT Breakout 14: Humanities Panel D

JASSIE MORCOS

Rutgers University, New Brunswick

[\*Constitutional Myths and Miseducation\*](#)

This research explores how, when, and why American Constitutional myths and miseducation began and became common understanding. Specifically, focusing on the development of constitutional myths surrounding ideas such as states' rights, checks and balances, tyrannical majorities, and government overreach. My research intends to understand the way these myths became common knowledge through miseducation from political party platforms and high school civics textbooks. There are many myths surrounding the constitution due to its ambiguous nature which is created through vague language. However, these four phrases are used the most in political discourse to divide and confuse citizens while setting engagement limitations. I aim to prove that our use and understanding of - states' rights, checks and balances, tyrannical majorities, and government overreach are unconstitutional and set in false narratives. Such false narratives are then used to give power to political minorities, hindering the ability of the political majority to create effective change a majority of Americans agree on.

ANISSA GARCIA

University of Wisconsin, Oshkosh

[\*What Bratz & Barbie Dolls Informed Us About Race\*](#)

The purpose of this study is to record and analyze how exposure to ethnic diversity, or lack of, in dolls could impact the establishment of an individual's racial beliefs. Although there has been previous research on how doll play impacts development, this project seeks to add to that body of work in a new way. This interview-based research examines a possible link between childhood play with dolls, and the creation of cultural competence and biases. Dolls were constructed to mimic living human beings and to model lifestyles, which is what makes them so unique to toy play. Furthermore, dolls' physical attributes such as skin color, hair texture, eye & nose structures, are all factors that can signify and perpetuate ideas of racial identities. Through this, dolls are a source that aids children in developing their worldviews, which may continue to impact them as adults. My hypothesis is that those who played with ethnically diverse dolls such as the brand 'Bratz', will experience more cultural competency than those who played with the brand 'Barbie'. As for the method and procedure, the Harvard Implicit Association Test will also be applied prior to the interviews. The interview process consists of 10 questions that will allow the individual to reflect on how dolls could have influenced the way they viewed themselves and others. We are aiming to gather participants, ages 18-30 years old. Overall, this research will help explain how dolls possibly served a position in narrating views.

SARA GONZALES

Westminster College

[\*The Boo Hag: A Discussion of Death & Gender in Gullah Folklore\*](#)

The boo hag is a witch/vampire rooted in the Gullah Geechee culture who sheds her skin to feed on her victims. Every night, with her flesh exposed red and raw, she flies into bedrooms, rides sleeping victims through the air, steals their breath, and absorbs energy through her skinless body. Rooted in the culture of West Africa, the African American boo hag is different from Eurocentric witches stemming from patriarchal beliefs. A boo hag is a "traveling spirit" (Creel) born from a "bad death." However, regardless of the deceased's gender, a boo hag is most relayed as female. The link between "bad" and female can be inferred in both European and Gullah Geechee witch lore. I argue that the boo hag symbolizes an enslaved woman's need to shed her identity, escape and seek out sources of energy. Using a modern feminist lens, I will compare multiple print variations collected between 1894-1917 to reinterpret the boo hag as a woman seeking anonymity, feeding her tired body and soul.

## July 30, 2021 - 1:10 PM PDT Breakout 14: Psychology and Cognitive Science Panel E

D'ANDRAH ALMANZAR

John Jay College of Criminal Justice

*Juvenile Justice and Mental Health: Examining Racial Disparities in the Juvenile Justice on Mental Health and Substance Abuse*

Previous studies have cited a number of factors that may influence youth experiences with mental health and substance abuse services – including insurance, lack of services given, racial disparities (Lopez, Nuno 2018). Further, studies focusing on youth of color have found that these youth have significantly lower rates of mental health service utilization and are most at risk for underserved mental health needs. (Rawal et al., 2004). Yet, with an everchanging society, in which factors like technology, social media, campaigns to destigmatize mental illness, and the global COVID-19 pandemic, it is unclear if youth of color still hold similar views about mental health and substance abuse. The current study will use a qualitative design (semi-structured interviews) and recruit a sample of college students between the ages 18-22 years old who are of any minority group: Hispanics, African American, Asian, Pacific Islander, American Indian/Alaskan Native and other non-White groups. The main findings of this research are to determine youth's perceptions of mental health, to determine what racial disparities come in between the access to mental health and substance abuse services and to determine the youth's perceptions and thoughts on juvenile youth with mental health and substance abuse.

JIA-YI MAI

John Jay College of Criminal Justice

*Prison Staff Perceptions*

Researchers have conducted many studies about the environment in prison. However, most of these studies focus on the prisoners and their perceptions of the prison environment and their well-being while incarcerated. Very few of them focus on the perceptions and well-being of the prison staff. The study conducted in this paper is a non-experimental, qualitative survey. This survey study asks the prison staff several questions regarding their perceptions of the prison environment. These perceptions include how they perceive working there has affected their well-being, and, if needed to, what can be done to improve the prison environment and their well-being.

DESTINY NICOLL

St. Edward's University

*The Troubled Teen Industry: An Analysis on the Origins, Practices, and Abuse Within Therapeutic Boarding Schools, Wilderness Programs, and Other Juvenile Delinquent Programs*

The troubled teen industry encompasses mental health facilities aimed at rehabilitating teenagers in therapeutic boarding schools, wilderness therapy programs, boot camps, and more. Teenagers who are recruited into the troubled teen industry often recall instances of abuse, brainwashing, and mental health regression once released. Through an analysis of literature that examines the origins of the industry and personal experiences of survivors, this study seeks to understand how the troubled teen industry came to be so prevalent and the effectiveness of its practices. This literature will involve past studies, books, podcast episodes, memoirs, and documentaries that detail either the history of or personal experience within the industry.

## July 30, 2021 - 1:10 PM PDT Breakout 14: Psychology and Cognitive Science Panel F

YAN SHAN YU

John Jay College of Criminal Justice

[\*Sexual Grooming Behaviors of Offenders: Identifying Its Relation to the Victim's Age\*](#)

Sexual grooming is the deceptive process by which an offender selects a vulnerable victim and prepares them for sexual abuse to avoid detection. It is estimated that almost half of all cases of child sexual abuse involve sexual grooming. Recently a content validated model of sexual grooming, the Sexual Grooming Model (SGM), has been developed in which 42 of grooming behaviors have been identified. However, it is believed that these behaviors may differ by the age of the victim. The present study explores the changing behaviors of the offenders depending upon the age of the child victim. CUNY undergraduate students were asked to complete a self-report survey based on the SGM. The grooming behaviors of those who endorse a history of child sexual abuse across three developmental age groups are examined. Expected findings are anticipated to show that offenders did use different techniques and behaviors to groom their chosen victim and some grooming behaviors are expected to be more prevalent within a specific age group.

YARELI PEREZ

John Jay College of Criminal Justice

[\*Adult Perceptions of Severity in a Sexual Abuse Case: The Impact of Gender of the Perpetrator and Victim\*](#)

Sexual assault is a serious problem in the United States and it is estimated that one in four girls and one in thirteen boys will experience abuse by the time they are 18. However, the majority of cases of sexual abuse do not result in conviction. This may be because perceptions of sexual abuse cases vary according to the different characteristics of the perpetrator and victim involved. For this reason, this project will examine whether perceptions of severity of crime differ upon the gender of the victim and perpetrator in sexual abuse cases. A general sample of U.S. adults obtained via mTurk will be randomly assigned to read one of four case vignettes in which the gender of the victim and perpetrator will be varied, and they will be asked to complete a series of questions about the case. They will be asked the degree to which they attribute responsibility/blame to the people involved, if any, and if the case displays a sexual abuse act. It is anticipated that cases in which there is a female perpetrator and male victim, the perpetrator will be seen as less responsible/blameworthy for the situation whereas the male victim will be attributed more responsibility/blame. These findings will be discussed as they pertain to the role of both the gender of the perpetrator and victim and see the impact on how people view the degree of severity of sexual abuse cases.

TASNIM TARANNUM

University at Buffalo

[\*Cognitive Impairments of Mild Traumatic Brain Injury in Survivors of Intimate Partner Violence: A Review\*](#)

One in four women has suffered intimate partner violence (IPV) while one in five experiences severe physical violence (CDC, 2020). Intimate partner violence is violence perpetrated by a current intimate partner which can lead to mild traumatic brain injury (mTBI), which is a physical hit to the head. One critical aspect that is often overlooked in the healthcare setting is the effects of IPV-related mTBI on the health and daily participation of survivors. This narrative review examines the cognitive effects of mTBI in survivors of IPV. This review also discusses how impaired cognition can impact participation such as engagement in daily functioning in survivors of IPV-related mTBI. Data regarding IPV, mTBI, and participation were extracted. Ten scholarly articles state that IPV-related mTBI causes cognitive impairment in survivors. IPV-related mTBI can damage parts of the brain, but a scholarly article on sports-related injuries reveals that sports-related mTBI is linked to weakened daily participation in athletes. For survivors of IPV, there is no research published on how IPV-related mTBI affects daily participation. Therefore, more research is needed to learn more about the effect of mTBI on survivors and remediate the effects of mTBI on survivors of IPV.

ABRIL BERETTA

University of Washington

*Sexual Assault in Sexual Minorities: The Role of Sexual Identities and their Relationship to Symptomology*

Sexual minority women (SMW), in particular bisexual women, are at greater risk of experiencing sexual assault and other types of traumas and stress as well as heightened symptom severity than heterosexual women. Among SMW, bisexual women in comparison to lesbian women have shown differences in symptom severity following sexual assault. To our knowledge, only three studies have looked at differences in mental health in bisexual and lesbian women who have been sexually assaulted, but their results have been contradictory. As such, the purpose of this study is to look into the symptom differences between bisexual and lesbian women following sexual assault to better understand their differences. To do this, I conducted a secondary analysis of an existing data set. I used a bivariate statistics test to compare lesbian and bisexual women in regard to their mental health following sexual assault with a focus on depression and PTSD symptoms.

This presentation reports on the results of the hypothesis test that bisexual women will have more severe symptoms of PTSD, depression, or anxiety. A better understanding of the differences between the two groups would allow better tailoring of treatment following sexual assault for SMW. This study will also help to further emphasize the need to look at sexual minority identities as singular unique identities with their own nuances within psychological studies.

## July 30, 2021 - 1:10 PM PDT Breakout 14: Sociology and Public Affairs Panel G

SAMANTHA ALMONACID

Boston College

[\*Drivers and Deterrents of Climate Change Policy in Iran and Afghanistan\*](#)

Climate change is an issue which has come to the forefront of society. It not only presents the possibility of major-irreversible shifts in the climate system, but leads to questions about how nations will cope with its impacts. The threats posed by climate change has led to global recognition of the need to mitigate and adapt to it through international cooperation and state policy. This paper examines the factors impacting climate change policy implementation in Iran and Afghanistan. While Iran, which is known for its insular nature and reliance on oil for economic growth, has implemented few policies, Afghanistan, despite the turmoil being experienced within the state, has made more political commitments towards combating climate change. This analysis explores the determinants of climate policy in Iran and Afghanistan, and compares the two cases through a comparative lens, due to their similar geographies and politics in order to better understand generalized factors affecting policy implementation. This study will first examine the climate policies in the two regimes, go on to determine what factors account for the difference in policies, and examine whether these factors coincide with factors discovered by previous studies.

ALEXA ABRUZESE

John Jay College of Criminal Justice

[\*Perceptions of Progressive Criminal Justice Policies and the Link to Justice Education\*](#)

Progressive criminal justice policies are widely considered by experts to move the criminal justice system forward. This project will focus on the debate surrounding abolishing capital punishment, implementing bail reform, and implementing drug decriminalization, three progressive policies thought to bring about reform. This study will address the question of how college students in a justice oriented academic institution perceive progressive criminal justice policies compared to college students in a non-justice oriented academic institution, and will seek to address the role justice education has in shaping these views. Surveys will be sent to three different groups: criminal justice majors at John Jay, non-criminal justice majors at John Jay, and all majors at College of Staten Island. By surveying these three groups, this study intends to determine the effects of a justice education on perceptions of these progressive criminal justice policies.

FRANK WOTTON

St. Lawrence University

[\*The Phenomenology of Intrapersonal Disagreement\*](#)

Ordinarily, when we think about disagreement, we think about disagreeing with others. Interpersonal disagreement is essentially about dissimilarity, but what would it mean for the self to be dissimilar? For Heidegger, care is the structure of Dasein, and the structure of care is the "ahead-of-itself." For Sartre, the self is separated from its being by the nothingness positioned between the two. Modern existentialism rests on the proposition that we are perpetually other than ourselves, but what is disagreement aside from otherness? This paper draws on Heidegger's existential analytic of Dasein's care and Sartre's writing on negation, especially as it pertains to care, to propose a reconstruction of intrapersonal disagreement that is grounded deeply in the phenomenological ontology of primarily Heidegger and Sartre.



## July 30, 2021 - 2:20 PM PDT Breakout 15: Education Panel A

MONAE OLLIVIERRE

John Jay College of Criminal Justice

*Attention Deficit Hyperactivity Disorder, or Childhood ADHD*

Attention Deficit Hyperactivity Disorder (ADHD) is among the second most prevalent neurodevelopmental disorders of childhood. Children with ADHD face challenges in their social interactions, such as rejection by their friends and strained relationships with their parents. There are several treatments used for the management of ADHD in children, including pharmaceutical and non-pharmaceutical treatment modalities. It is unclear which ADHD treatment approach works best in children and adolescents between psychological and pharmacological treatment approaches. The purpose of this study is to analyze evidence to determine which treatment option between the non-pharmacological treatment options and pharmacological shows greater efficacy. The meta-analysis involved a search of relevant articles from the MEDLINE database, which was accessed using the PubMed search engine, and data extraction using a data extraction sheet. The study only used studies that had full texts because they provided complete information on individual study reporting measurements which were to be used for the meta-analysis. Three randomized control trials were critically appraised and secondary data from the article quantitatively analyzed through forest plot. From the review of the forest plot, it can be noted that the results favor the use of pharmacological treatment methods over non-pharmaceutical treatment methods for ADHD among children and adolescents.

CRISTAVEL CAMACHO-GUTIERREZ

University of California, Davis

*Parental Engagement in Special Education: Highlighting the Community Cultural Wealth of Latinx Parents*

Latinx immigrant parents may arrive in the United States with an optimistic attitude toward the challenges that await them, but too often the community cultural wealth that they bring goes mainly unacknowledged by educational institutions. Though many Latinx parents lack some of the necessary skills to access resources and services that may support their children's academic success, they utilize their navigational capital to maneuver the special education system with the hopes of supporting their children's academic success. My research aims to identify the community cultural wealth of Latinx families with children with special needs, and to learn about how they utilize it and other forms of capital to engage with educational institutions. Likewise, I will explore the barriers that these families encounter. Given the current state of the Covid-19 health crisis, I am concerned that the barriers that they face have exacerbated these preexisting challenges and created additional barriers for parents to navigate. I will conduct a qualitative study through telehealth, which will consist of semi-structured interviews to be carried out with Latinx parents of children with special needs. My research will illuminate some of the current challenges faced by this particular group of parents while highlighting their resiliency and desire to organize. My findings will shed light on areas of further research and may have policy implications to reduce barriers for immigrant parents.

BRITTANY JASPER

University of California, Los Angeles

*An analysis of Black elementary students, racial profiling, and Special Education*

Existing literature regarding special education in California elementary schools reveals that Black students are disproportionately recommended to these programs, such as the Individualized Education Program (IEP); these wrongful recommendations perpetuate racial discrimination as they are often executed through racial profiling due to lack of culturally relevant teacher trainings (Alexander, 2009). There is currently minimal attention given to the consequences created for Black students and for their families. This research uses critical education theory and critical white study as a framework to provide further insight into culturally relevant educational policies and teacher training.

## July 30, 2021 - 2:20 PM PDT Breakout 15: Education Panel B

MARISSA ANTU

Our Lady of the Lake University

*The Effects of Diversity in Children's Literature on Adults' Perceptions of Children's Demonstration of Emotional Skills*

Literature develops emotional intelligence in youth in that by engaging in perspective taking, readers learn significant social skills such as identifying, understanding, and being able to make inferences about the emotional states of others. In 2019, the Cooperative Children's Book Center did a study of the 4,035 books received that year and found that only 29% of those books featured characters of minority. The purpose of this study is to determine how representation of underrepresented communities in children's books might affect a child's development of emotional skills. An experiment will be conducted in which adults will be interviewed about their experience reading children's books with diversity themes and/or characters from underrepresented communities to children. With the narratives and in-depth descriptions received from these interviews, it will be discerned whether adults perceive there to be any marked effect on children's use of emotional skills caused by diverse children's books, and, if so, in what ways. If the findings of this study prove that diversity within children's books does, in fact, encourage utilization of emotional skills in children, then American schools may be moved to improve the diversity of their book selection within their English curriculum.

ESMERALDA SALAS

University of California, San Diego

*Impacts of Social and Emotional Learning at Akanksha Foundation*

The University of California, San Diego's [UCSD's] Partners At Learning [PAL] Program co-designed a research project with the Akanksha Foundation about the impact of social and emotional learning (SEL) on students, teachers, and their families. The Akanksha Foundation is a nonprofit organization located in India dedicated to providing K-12 students from impoverished communities around Mumbai and Pune an opportunity to access a high-quality education. SEL is defined, by CASEL, as including five core competencies: self-management, self-awareness, social awareness, responsible decision making, and relationship skills. These competencies revolve around teaching students other subcomponents such as identifying emotions, learning about empathy, understanding self-motivation and the role of reflecting, and the importance of teamwork. Data gathered in this study has been analyzed using the theoretical framework of Positive Youth Development (PYD). Lerner's PYD, characterized by the "Five Cs"-- Competence, Confidence, Connection, Character, and Caring, is based on positive youth development and strengths. PYD builds upon existing family and community assets by promoting social support, positive identity and values, social competency, and empowering youth. This study evaluated Akanksha's SEL curriculum using the PYD framework. This study also fills in the gaps of PYD across cross-cultural and international contexts, since a majority of PYD literature conducted has been in white, affluent communities in the United States. Findings indicate that parent engagement helped promote both student and parent wellbeing. Also, facilitating youth leadership increased student engagement, feelings of purpose and belonging, and autonomy over learning.

DENISE CASTRO

University of California, Santa Barbara

*First Generation College Students VS. Inequities in K-20 Education*

In the U.S., one is considered to be a First-Generation College Student (FGCS) if their parents did not obtain a bachelors' degree. Although the definition may seem clear, some institutions define FGCS as students whose parents did not earn a college degree in the U.S. Because there is an unclear understanding of what a FGCS is, we are limited in our understanding about what particular approaches and experiences support FGCS in higher education. In this study, I will provide some clarity on who should constitute as a FGCS as well as present insight into the socio-emotional phenomena regarding their experiences, particularly in how they recall having navigated the widely acknowledged inequities in K-20 formal schooling systems. In exploring the experiences of this student population with a critical lens, I aim to identify prominent patterns in how first-gen undergrads have confronted and managed a toxic educational system in pursuit of their educational goals. Data will be collected through several semi-structured interviews with focus groups who identify as first-generation students. A narrative approach will be used to examine a timeline of participants' educational, social, and home experiences in K-20, including high points of accomplishments, joy and fulfillment as well as low points of disappointment and frustration. Findings of this study can help inform educational policies for supporting First-Generation College Students in addition to mental health practitioners that serve this population.

Abstract titles link to event detail pages.

## July 30, 2021 - 2:20 PM PDT Breakout 15: Humanities Panel C

SARAH ROBINSON

Kent State University

*Suicide Training and Counselor Education*

The purpose of this study is to understand the attitudes toward the topic of suicide in the counselor education and supervision (CES) community. This research expands upon prior research by exploring the perceived attitudes toward suicide among counseling faculty, supervisors, leaders, and students. The research question is: What are the perceived attitudes in CES toward the topic of suicide? The study involved 45-90 minute phone interviews with 15 participants, including counseling faculty, supervisors, and/or administrators. The majority of participants identified as White and female. Applying interpretive phenomenological analysis (IPA) methodology guides the researchers in two phases: 1) developing a descriptive account of phenomena through the perspective of the participant and 2) interpreting underlying meaning about perceived attitudes toward suicide. The steps of IPA include reading and rereading, developing emergent themes, searching for connections across emergent themes, moving to the next case, looking for patterns, and making interpretations to deeper levels. The present study utilizes the talents of a McNair scholar, their McNair Mentor, Dr. Jenny Cureton, and a research team of counseling doctoral students and faculty members. Findings will inform counselor training on suicide, training program functions, and leadership and policy impacting counselors and counselor preparation.

TARAH SHAW

Purdue University Northwest

*How to Write Trauma: The Healing Power of Creative Writing and how to Tell Painful Stories*

The aim of this article is to explore the ways in which creative writing can help to aid those suffering from trauma as well as understanding the importance of trauma writing. More importantly, this article is meant to explore what makes for good trauma writing and what things a writer should and shouldn't do when writing trauma. As a result of this research, I have concluded: a) Creative writing as well as other forms of self-expression can be used to heal trauma b) The best trauma writing is that which not only tells about the event, but also provides insight into how the individual was affected by said event. c) Good trauma writing is honest and tells the full story (even if recalling it may be painful). Moreover, I have examined that ways in which writers can approach trauma writing in a healthy way. I concluded that a) Trauma writing helps people to reshape their memories and change their story. b) Those writing about their trauma should not be phased by feelings of shame and guilt that society often imposes upon victims of trauma. c) Those writing trauma should understand that their work is important because there are many people who may be suffering from traumatic events similar or identical to that of the writer and this helps those reading trauma to understand that they are not fighting alone.

ANNALYSE GRANOWSKI

St. Edward's University

*The Well of Tears: Margery Kempe and the Spiritual Power of Non-Verbal Communication*

The Middle Ages in Europe found some women developing and navigating different forms of agency within the church, in particular female mystics who received visions from Christ and were models of devout faith and behavior. The case of Margery Kempe, a fifteenth-century Englishwoman, is especially interesting because she was forced to navigate a difficult religious and political environment that included many accusations of heresy. Although she was illiterate, she dictated her visions and experiences in her Book. Her intense and exemplary modes of devotion and faith ultimately brought her harsh forms of social rejection, mostly because of her fits of sobbing and writhing that often disrupted mass. Margery explained her behavior as an emotional reaction to Christ's passion. However, there is a social component connected to Margery's spirituality. The more severely that she is accused of heresy, the more members of the clergy and her society are impacted by her behavior, and the stronger her relationship with Christ becomes. This research aims to analyze how her feminine stereotypical behaviors created her social identity and how these behaviors were a form of non-verbal communication that, while disruptive, could not ultimately be judged as heretical by inquisitors.

## July 30, 2021 - 2:20 PM PDT Breakout 15: Humanities Panel D

JOSIE LOPEZ

Knox College

[\*Literary Expressions of Spanglish\*](#)

The authenticity of Spanish usage in children's literature has been widely investigated, with many scholars having found that the way Spanish is used in children's books is not accurate and caters more to a monolingual English audience than to native speakers of Spanish and bilingual audiences. Previous research has also explored Spanglish and Spanish/English code-switching and how it is presented in children's literature, but these articles have yet to fully study how accurate and authentic Spanglish appears in literature in general. This project addresses this issue by exploring a variety of works that claim to include Spanglish, especially those with acclaimed authors who are known for their use of Spanglish. I specifically examine whether there is Spanglish present or if it is code-switching under the guise of Spanglish. I argue that much of the so-called Spanglish presented is more so code-switching, and that in literary form, Spanglish is still being constructed, but that it's legitimacy remains for now in its oral form. Despite the prevalence of spoken Spanglish, the usage is still controversial, and by examining how written Spanglish forms reflect oral forms, I also consider language ideologies as well as how those ideologies are presented to speakers.

MICHELLE ALVARADO

University of North Georgia

[\*Significance of Rudolfo Anaya's Novel Bless Me, Ultima to Young Chicano/a Readers in the 21st Century\*](#)

The assimilation of cultures in Anaya's Chicano novel Bless Me, Ultima has prompted multiple debates on which culture the protagonist Antonio must choose: his Mexican indigenous side or his Latin fused culture with Anglo-American. However, I argue that Anaya proposes a balance of Antonio's two worlds. I demonstrate this balance by analyzing Anaya's novel through a New Critical lens while at the same time trying to prove how Gloria Anzaldúa's borderlands theory shapes the novel and Antonio's decisions. The certain aspects that will be addressed are the overarching metaphor of the two sides, las Pasturas and the city of Guadalupe, the mythology depicting evil and good, and narrative voice. By looking at Anaya's novel through a New Critical lens this novel's structural merit can be observed, revealing important insights on the issue. These insights are particularly important to Chicano/a readers who struggle with an identity crisis similar to the one that Antonio faces.

RANE PRAK

University of Texas at Austin

[\*The Fluidity of Tradition and Modernity in Khmer Storytelling\*](#)

Storytelling can be a conversation among people of different generations, a conversation that helps them negotiate a shared identity based on both the past and the present. As Khmer stories are adapted into different genres and media, including feature films, television dramas, and performance arts, the social messages that different writers communicate shift and evolve. Yet, these desperate modes of storytelling retain their powerful affect as embodied ways of sharing identity between generations from past to the present. My research, which centers on modern and contemporary adaptations of "traditional" Khmer storytelling, moves beyond the conventional imperialist paradigm that posits a dichotomy between modernity as enlightened and progressive, and tradition as conservative and backward, arguing for a more nuanced conception of the dynamic relationship between the two. These kinds of cultural artifacts are not produced purely for entertainment, nor solely as vehicles for nostalgia. Moreover, I argue, these adaptations play a productive role in the ongoing negotiation and construction of identity in Cambodia and among Cambodian diasporic communities.

## July 30, 2021 - 2:20 PM PDT Breakout 15: Psychology and Cognitive Science Panel E

ZOE SIMS

Kent State University

[\*The Experiences of Collegiate Athletes during the COVID-19 Pandemic\*](#)

This study examines the effects of the COVID-19 pandemic on the mental health and wellbeing of collegiate athletes. This research will address the help-seeking behaviors of collegiate athletes in order to destigmatize mental health concerns within athletics. The purpose of this qualitative case study is to acknowledge the mental health challenges that athletes face and are currently facing during the COVID-19 pandemic. This case study will consist of the researcher asking several open ended questions to the student athletes and recording their responses. A total of five student athletes will be interviewed for this study, varying in gender, race, and sport. The interview questions will address their experiences at the beginning, middle, and present day of the pandemic. After getting the participants' responses, the results and findings of the study will be recorded. The researchers expect to find that student athletes experienced higher levels of anxiety during the COVID-19 pandemic. They also expect to see athletes report higher stress levels during the academic semester since they are balancing COVID testing, their sport, and their academics. Finally, they expect to find that the mental wellbeing of athletes overall was worse when they were sent home abruptly at the beginning of the pandemic.

AMINA MEKY

Rutgers University

[\*COVID-19 Impact on undergraduate Rutgers students\*](#)

College students are a vulnerable demographic, as a result, the pandemic had a negative impact towards the population. This study will focus on the effects of the COVID-19 pandemic on undergraduate Rutgers University students. Mental health, physical health, emotional health, and social interactions are being analyzed through a Qualtrics survey distributed to 500 Rutgers undergraduate students. This survey also examines COVID-19 stressors which were present in student's lives such as distractions, technology issues, coping methods, unemployment, and family income. Preliminary results show an increase in depression and anxiety. Students also reported a growth in boredom, loneliness, and feelings of sadness. The purpose of this study is to fully understand the aftermath of the COVID-19 pandemic and how the transition to a virtual environment, in addition to living through a pandemic changed the lives of students. It should be noted that Camden and Newark campuses were not included in this study, only New Brunswick.

GEORGINA DUKER

Rutgers University

[\*Approaches to Social-Emotional Learning After the COVID-19 Pandemic\*](#)

The COVID-19 pandemic has caused challenges for schools, care-givers and learners. For high school students in particular, the switch to online learning resulted in disruptions in many activities that would foster school connectivity and familiarity in the normal school year, such as sports and after school programs. A growing body of research connects the last academic year's online learning experience to lack of physical activity, sleep and a healthy lifestyle. In addition, the consequences of the pandemic resulted in mental health concerns for students and caregivers. As a result of these occurrences, students did not have the most supportive and positive environments to learn. The current study will look at Social-Emotional learning curriculums and how they can best serve students to develop school connectivity, communication and healthy habits in the upcoming school year. To do this, two Social-Emotional learning (SEL) interventions will be provided to participants. One intervention will focus on direct SEL instruction while the other will focus on SEL instruction which is embedded into social studies class. The expected findings is that a combination of direct and indirect SEL in a positive school climate will better allow students to form and practice SEL skills and further improve learning environments after the COVID-19 pandemic. This study will inform strategies that schools use to support students after events that disrupt familiar learning environments.

MURIUM WHALA

Rutgers University

*Post-Emergency Remote Instruction: Relationships Between Adolescents' Social-Emotional Learning, Extracurricular Activities, and School Connectedness*

The COVID-19 pandemic has resulted in an abrupt transition to emergency remote instruction across the United States. With many schools planning to reopen with in-person instruction for the 2021-2022 school year, adolescent students will undergo a transition period to readjust from a virtual to physical school climate. This project will highlight the importance of social-emotional learning (SEL) skills being developed and utilized by adolescent students during this time, particularly middle school students. The aim of this work is to investigate the relationship between middle school students' SEL, and both their levels of engagement in extracurricular activities as well as school connectedness. This study plans to undergo a sequential explanatory mixed methods design among 60 students enrolled in a northeastern public middle school for the 2021-2022 school year. T-scores from the Devereux Student Strengths Assessment (DESSA) measure will be used to inform the creation of three comparison groups: students with high, average, or low SEL competency. Focus groups will then be conducted, transcribed, coded, and analyzed to assess relationships between levels of SEL competency and engagement and connectedness in schools among middle school youth. This study expects to find that students with high SEL will be more likely to be actively engaged in extracurricular activities and have more positive perceptions of their school climate than their peers with average or low SEL. These findings will illustrate the influential effects of SEL and its role in creating a positive and engaging school climate post-pandemic.

## July 30, 2021 - 2:20 PM PDT Breakout 15: Psychology and Cognitive Science Panel F

ANTOINETTE BANKS

University of California, Davis

[\*Scaffolding Development: A meta-analysis of the role of parents in shaping children's executive function development\*](#)

Executive function skills are essential for a child to prioritize daily tasks, control impulses, problem solve, and accomplish milestones. Executive functions improve across childhood and demonstrate variable developmental profiles. Numerous research studies have demonstrated a correlation between a broad range of parenting behaviors and children's executive function development. For example, parental scaffolding predicts child developmental outcomes, such as executive functions. However, the true correlational size of parental scaffolding and executive functions is unclear due to terminological inconsistencies of broadly defining parental scaffolding. To address this issue, I will conduct a meta-analysis of the relationship between parental scaffolding and child executive functions by first narrowing parental scaffolding into three categories: (1) cognitive support, (2) behavioral support, and (3) the promotion of autonomy. A unique machine learning approach (LitsearchR) will be used to generate the meta-analysis search protocol. This approach will further systematize the search process, help to resolve terminology paradoxes, and identify key search terms related to our phenomenon of interest. As a result, the meta-analysis will inform theories of child development and parental impact by clarifying the relationship between parental scaffolding and executive function development. Future research should consider how parental scaffolding facilitates executive function development and how environmental factors may influence this relationship. This work will help inform future studies interested in individual parental scaffolding techniques and how environmental and contextual considerations may play a role in children's executive function development.

ANDREA MACIAS

University of California, Los Angeles

[\*More Than Just Mom: Investigating Linkages Between College Mothers' Unintentional Role-Modeling and Indicators of Children's Academic Success\*](#)

Despite the continued lack of supportive university policy for student parents, this population is growing and research shows that they are a highly motivated student group that often has greater academic achievement than their non-parenting counterparts. Minimal research has focused on how children are affected by their mothers pursuing higher education. Previous research has found a positive relationship between mothers' student role motivation and children's academic motivation. There are also additional factors related to mothers' direct interactions with their children (e.g., attitude in helping with homework) that are partial mediators for this relationship. However, there has not been enough research investigating other mechanisms through which student mothers may impact their children. The present study seeks to examine how student mothers affect their children through unintentional role-modeling, like studying in their children's presence. Using questionnaires, this study will investigate the relationships between children's perceptions of their mothers' student role and children's academic self-efficacy, growth mindset, and academic achievement. It is hypothesized that positive relationships will be found among these variables. This research is significant because it can suggest whether student mothers have a positive psychological effect on their children when they are active students in higher education. Therefore, the findings can inform universities on why they should invest in efforts to promote the retention and success of this population by further supporting student parents and their children.

EVELYN ESTRADA GONZALEZ

University of Nebraska–Lincoln

*Promoting parent-child interaction and parenting efficacy during early childhood: What support strategies are used by teachers during home visits?*

With many parents and caregivers working outside of the home, infants and toddlers are spending more time with other individuals, such as early childhood educators (ECEs). This creates a need to form a partnership between parents and ECEs to provide an environment where children have optimal development across childcare centers and homes. The purpose of this study is to understand how ECEs support parent-child interactions and parenting efficacy through support strategies they use during home visits with families. Data from this study comes from the Getting Ready intervention, a longitudinal study focusing on promoting children's development by strengthening relationships between parents, ECEs, and children. In this study, ECEs were provided with training on eight strategies designed to promote parent-child interactions and parent partnerships. Parent-child interactions were examined using data from 15–30-minute coded videos. Approximately 1-hour coded videos were used to examine the strategies used by ECEs during home visits. Lastly, a self-reported parent questionnaire was used to examine parenting efficacy. Overall, about 42% of the ECEs used 5 or more strategies out of the 8 that were examined for this study. The most used strategy was focusing parent's attention on the child's strengths, while the least used was encouraging parent-child interactions. Additional analysis will explore associations. These results will add to the understanding of the Getting Ready intervention and highlight the importance for ECEs to use the strategies during their home visits.



## July 30, 2021 - 2:20 PM PDT Breakout 15: Sociology and Public Affairs Panel G

MARIO COACHMAN

Kent State University

[\*Solving Gentrification: Renovation Without Displacement.\*](#)

Gentrification has been a topic of some time, especially in recent decades. In this research, I will be exploring how this phenomenon affects the community itself. Although, the process of gentrification is intended to renovate neighborhoods with long histories of disinvestment, it often displaced minority residents and shifts the culture of the area. Ultimately, my goal is to research policies and initiatives that have been put in place to reduce displacement in gentrified areas. From this research I aim to create a solution kit that would help to tackle the issue of displacement and cultural influx in terms of gentrification. Furthermore, the main area of focus includes gentrification in Hingetown of Ohio City, Cleveland, during the past decade (2010-2020). I plan to examine past case studies on gentrification in Hingetown of Ohio City to gain some knowledge on procedures that work best in evaluating the issue. In addition, I will be conducting interviews with practitioners engaged in the community and local residents. Information from these interviews surrounding procedures to tackle displacement will be collected and interpreted for the utilization in the solution kit. Expected solutions include initiatives that increase the access to capital and space so that minorities have control over their own displacement. As well as, local reinvestment in the area to keep property and living conditions affordable for previous residents.

ALICIA LOPEZ

University of California, Los Angeles

[\*Immigrant Latina Small Businesses, Gentrification, & COVID-19: How a Pandemic Contributed to the Shuttering of Minority Women Owned Businesses\*](#)

The research that I will be conducting seeks to examine the impact COVID-19 has had on the experience and entrepreneurship of immigrant Latinas in DTLA. More specifically, it will analyze how processes of gentrification and neighborhood change have been expedited by the pandemic. The research pertaining to the gentrification of the greater LA area seldomly focuses on the intersections of race, ethnicity, and gender which highlights the importance of filling these gaps within the existing literature and it is why I will be approaching this study through Critical Race and Feminist Theory Frameworks.

Gentrification and neighborhood change continues to displace and ravage the most vulnerable communities of DTLA and with a pandemic looming overhead, minority women owned businesses are shuttering at exponential rates. In my preliminary findings and initial interviews, I have discovered that many of these women have faced displacement in some form whether it be from loss of business due to social distancing guidelines, forced closure due to financial loss, or the necessity to seek work in other informal labor sectors that have not been impacted by the pandemic.

This project is a significant contribution because it highlights some of the many inequalities that minoritized and underrepresented communities have faced due to the pandemic. Furthermore, my research offers a perspective that is grounded in the community that is facing these issues due to it being my experiential knowledge.

GAVIN PORTER

University of Texas at Austin

[\*African American housing\*](#)

Over the summer, I would like to focus on the affordable housing programs in the Austin area and come up with a guide to help people locate the available resources to them in our community. During the past several years Austin has been one of the fastest growing cities with a housing market that is becoming increasingly hard to access with the housing market price in the city jumping 42% in just the past year alone which is also causing rental prices to jump. The main reason for the research is when looking for affordable housing it can be difficult to find all the resources or be aware of what resources are available to them or how to locate them. By doing the research and putting all the resources provided by different programs into one guide it should make finding somewhere to stay a lot easier and affordable to those who struggle to find housing. I want to focus on government backed programs such as housing choice vouchers and income restricted units as well as non government programs in the community set up to help lower income residents in the city. I plan on using the internet and doing interviews with professionals who work at the various organizations to get a real idea of what each does and their purpose to the community. My end goal would be to create a guide or list showing people the resources available to them when attempting to find housing in Austin.

Abstract titles link to event detail pages.

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