

College of Behavioral and Social Sciences



Presents

Symposium of Student Research and Scholarly Work

April 20, 2011

Presentations 5:30 – 7:00 p.m.

Reception 7:00 – 8:00 p.m.

Welcome to the 10th Annual
Symposium of Student Research and Scholarly Work

On behalf of the College of Behavioral and Social Sciences, it is my pleasure to welcome you to our college-wide Student Symposium for 2011!

The Symposium is an annual celebration that recognizes outstanding student scholarship in the College of Behavioral and Social Sciences. Now ten years in the running, it is one of our keynote end-of-year rituals. A select group of our undergraduate and graduate students present on topics they researched in one of their courses or as part of a research project sponsored by one or more BSS faculty. In addition to research projects, students also present a series of engaging and interactive displays during the concurrent poster sessions.

After the presentation sessions, please join us in the BMU Grand Ballroom for a reception honoring our presenters, their faculty mentors, and their families.

Dr. Gayle E. Hutchinson, Dean
College of Behavioral & Social Sciences



Faculty Mentors

Dr. Eric Bartelink
Dr. Brian Brazeal
Dr. Jacquelyn Chase
Dr. Chris Coughlin
Dr. Jesse Dizard
Dr. John Eckalbar
Dr. Liahna Gordon
Dr. Lawrence Herringer

Dr. Pamela Johansen
Dr. Guy King
Dr. Penelope Kuhn
Dr. Janja Lalich
Dr. Michael Mann
Dr. Brian Oppy
Dr. Diana Shepherd

Dr. Chunyan Song
Steve Stewart, MA
Dr. Matthew Thomas
Dr. Martin van den Berg
Dr. Eddie Vela
Dr. Gail Walton
Dr. Lori Weber
Julie Withers, MA

Oral Presentations

BMU 204

Moderated by Dr. Eric Bartelink

Garrett Brown
Rachel Colonna

DETAILED PHOTOMICROSCOPY AND QUANTIFICATION OF AXON ULTRASTRUCTURE IN DEVELOPING MICE

We previously quantified a variety of morphological features in several spinal cord tracts in adult (8 weeks old) mice. Features of interest included axon size, shape factor, and G-ratio which identifies the relationship between axon diameter and myelin thickness. We are extending this research due to differences discovered between normal mice and mice with a mutation in a signaling receptor called p75^{NTR}. Currently, we are investigating differences in mice that are 7 days old. We are interested in determining if the changes seen in adult axon tracts are evident in the developing central nervous system. The goal of this work is to determine if p75^{NTR} is a candidate for strategies to enhance recovery after brain and spinal cord injury. (*Mentor: Dr. Penelope Kuhn*)

Garrett Brown
Julie Najar

DETAILED PHOTOMICROSCOPY AND QUANTIFICATION OF AXON ULTRASTRUCTURE IN ELDERLY MICE

We previously quantified a variety of morphological features in several spinal cord tracts in adult (8 weeks old) mice. Features of interest included axon size, shape factor, and G-ratio which identifies the relationship between axon diameter and myelin thickness. We are extending this research due to differences discovered between normal mice and mice with a mutation in a signaling receptor called p75^{NTR}. Currently, we are investigating differences in aged mice. We are interested in determining if the changes seen in adult axon tracts are modified by the aging process. The goal of this work is to determine if p75^{NTR} is a candidate for strategies to enhance recovery after brain and spinal cord injury. (*Mentor: Dr. Penelope Kuhn*)

Colleen Cheverko

OSTEOARTHRITIS AS A MEANS TO REASSOCIATE COMMINGLED SKELETAL REMAINS

This presentation reports on the use of osteoarthritis as a means to reassociate commingled skeletal remains from an ossuary context. A comprehensive analysis of individual joint surfaces was conducted using 24 discrete individuals from the prehistoric Orendorf site, located in Illinois. Associations were found between the presence of osteoarthritis and the severity scores in the joints of the hip, knee, and shoulder, but only partially in the elbow. A separate analysis of all adult joint surfaces was performed using the Gold Mine skeletal collection and osteoarthritis severity scores were assigned in an effort to aid in reassociation. Only 1.7% of the Gold Mine joints (12 out of 691 individual joint surfaces) were reassociated. Results of this study indicate that while osteoarthritis may be an effective tool to help researchers reassociate skeletal remains, it may not be practical in certain circumstances. (*Mentor: Dr. Eric Bartelink*)

Nicholas Ferguson

SINGLISH: AN INDEX OF IDENTITY

This presentation explores the influence and consequence of politically supported English and Mandarin education on Singaporean Colloquial English. Research was conducted through observation and interviews with Singaporean informants over a span of one and one half years. Singlish is not only an accumulation of multiple languages, but is an index of identity, linguistic freedom, individuality, and multi-ethnic origins for the Singaporeans that speak it. In a time of disappearing languages and culture, and an increase in global relations, linguistic ingenuity will not only persist but also thrive regardless of pressures. (*Mentor: Dr. Brian Brazzal*)

BMU 314

Moderated by Dr. Jacquelyn Chase

Matt Weber

LAND SUBSIDENCE AND AQUIFER DEFORMATION AS A RESULT OF GROUND FLUID WITHDRAWAL: A PERSPECTIVE FROM LANDSCAPE ECOLOGY

A vast store of water, natural gas, and oil lies beneath the Earth's surface. These ground-fluids can exist in cavities called aquifers (water) or reservoirs (oil and gas), or they can be diffused throughout a substrate. Groundwater dependent ecosystems (GDEs) rely on aquifers, springs, near surface water, flooding, and subsurface stream flow. Aquifer deformation can result from extractive processes, altering the hydrogeology of a region. This presentation examines this problem from the viewpoint of landscape ecology, detailing how biotic and abiotic systems interact at different scales. Since anthropogenic disturbance is the major cause of aquifer deformation and ground-fluid withdrawal, the human landscape will also be considered. *(Mentor: Dr. Jacquelyn Chase)*

Faith De Leon

ASSESSING THE EFFECTS OF URBANIZATION ON CALIFORNIA'S AGRICULTURAL LANDS

The focus of my research is to investigate the possible connection between the expansion of urbanization into areas of prime agricultural importance in California and declining productivity in California's agriculture. Among the top ten agricultural producing areas in California, over 151 thousand acres of farmland have been developed between the years of 1990 and 2004. A review of the literature and analysis of data from the Natural Resources Conservation Service shows that while urbanization is not affecting all areas of California's agriculture, it is significantly affecting the levels of productivity that have made California the leader in agricultural production. Analysis of the numerous forms of farmland protection that have developed at a national and state level helps explain why the current level of protection is inadequate. *(Mentor: Dr. Jacquelyn Chase)*

Ryan Miller

THE SLUMIFICATION OF THE SUBURBS: AN ANALYSIS OF DECLINE IN AMERICA'S INNER SUBURBAN AREAS

The majority of academic research on urban decay focuses on America's inner-cities. This presentation explores how two concurrent forces – the outward suburbanization of cities, coupled with the gentrification of the inner-city – are resulting in the migration of decay outward into first tier suburbs. By defining what constitutes a 'first tier' or 'inner suburb', and then examining a few of their key characteristics, this presentation provides insight on the problems these areas will face in reversing their decline. *(Mentor: Dr. Jacquelyn Chase)*

Lingfei Ni

A DISEQUILIBRIUM MODEL FOR THE PEOPLE'S REPUBLIC OF CHINA BEFORE 1978

In this presentation I assess the explanatory efficacy of Walrasian Equilibrium Model often used to characterize market structure. Markets within a macroeconomic structure are highly connected. A single shock to one market (which happens all the time) can trigger unbalance in other markets, causing price levels to deviate from its equilibrium point, leading to a non-clearing market. Economics graduate schools tend to characterize market structures within the Walrasian Equilibrium Model framework. I argue, however, that this framework is not fully capable of explaining non-clearing market effects. A non-Walrasian equilibrium model is presented as a way to describe the non-clearing market; I will use China's political economic structure to exemplify how a non-Walrasian equilibrium model can be applied. *(Mentor: Dr. John Eckalbar)*

BMU 304

Moderated by Dr. Michael Mann

Vanessa Erro
Matt Long
Jean-Claire Peltier
Bryan Troxell

UNIVERSITY UNIVERSALITIES?: AN EXPLORATION OF COLLEGIATE CULTURE IN CHICO AND CHINA

This presentation will provide CSU Chico students and faculty an opportunity to explore the similarities and differences between Chicoan norms and the Chinese counterparts at Linyi University. Using charts and graphs that reflect data collected in the National Survey of Student Engagement locally and in China, we will touch on several topics which illuminate the contrast between the Chinese and Californian college experiences. *(Mentor: Dr. Chunyan Song)*

Joseph Rogers

WHAT I LEARNED THAT WEEKEND: ANALYSIS OF THE MAKING OF “IF THESE HALLS COULD TALK”

Racism continues on college campuses throughout the country in spite of administrations' protests to the contrary. Because of a lack of awareness about invisible racism students of color are still marginalized in and out of the classroom. The film opened a facilitated dialogue between 11 students from various ethnic backgrounds, majors, ages, and ways of life. This presentation reflects my perspective, my learning curve, and my revelations experienced during the filming. I work to reveal the truth I have regarding the continued, injurious, and toxic silence regarding invisible racism on our campus. *(Mentor: Julie Winters, MA)*

Fay Cleveland
Linly Duenow
Faviola Mercado
Maria Rodriguez

EVALUATING REAL GIRLS: DETERMINING THE EFFECTIVENESS OF A SCHOOL HEALTH INTERVENTION PROGRAM FOR HIGH-RISK MIDDLE SCHOOL GIRLS

Middle school girls with a history of trauma are more likely to experience poor school performance, exhibit behavior problems in school, and participate in a wide variety of high-risk health behaviors. The REAL Girls program was designed to help middle school girls gain the confidence and coping skills required to achieve school success and enhance personal decision-making. This mixed methods study used pre- and post- cross-sectional surveys and focus groups to determine whether or not the program achieved its objectives. Results suggest the intervention increased participant levels of self-confidence, self-esteem, perceived social support and problem-focused coping skills and that those increases contributed to improved school and health outcomes. These findings suggest the efficacy of the REAL Girls program and support wider spread use of its program strategies. *(Mentor: Dr. Michael Mann)*

Camzin Morrell-
Stinson

DESTINATION DEMAND: THE DESTINATION SELECTION OF ECONOMICALLY COMPETITIVE IMMIGRANTS

In the increasingly globalized labor market it is pertinent to understand what motivates competitive immigrants to select particular destinations. This presentation explores the political, legislative, and economic climates of the United States and Canada, juxtaposed to their resultant immigrant flows, to build a model of potential immigrants' demand function. *(Mentor: Dr. John Eckalbar)*

BMU 312

Moderated by Dr. Gail Walton

Zina Bonham
Dana Mezeul

EXPLORING CULTURAL IMPACT OF CHILDREN'S PERCEPTIONS OF WAR, PEACE AND ENEMY THROUGH CHILDREN'S ART: A CROSS-CULTURAL STUDY OF CHILDREN IN THE UAE & USA

This study investigates how gender, age and nationality influence children's perception of conflict and peace. Thirty-one children from Chico, California and twenty-seven children living in the United Arab Emirates, age 6 to 12, were asked to draw pictures of peace, war and enemy. The age, gender and nationality of the children were all found to explain differences in the children's drawings; however, nationality and age were found to account for the most variance in the drawings. Understanding children's perceptions of conflict and enemies are critical in understanding ways to promote peaceful relations in the lives of young children. (*Mentor: Dr. Chris Coughlin*)

Jessica Damron

POSTPARTUM STUDY

The most under diagnosed obstetric complication in the United States is postpartum depression, a mood disorder affecting approximately 13-16% of mothers. The purpose of this needs assessment was to document the prevalence of PPD amongst mothers at pediatric health clinic well-child visits. The Edinburgh Postpartum Depression Scale (EPDS), a measurement tool consisting of ten likert-type questions was utilized to gather qualitative data from thirty subjects. Thirteen percent of study participants surpassed the threshold indicating possible PPD detection; moreover, 7 % denoted the exhibition of suicidal ideations within the past seven days. Subjects requiring referral intervention services lacked active health insurance given the 60-day limitation of the State funded Comprehensive Perinatal Services Program. (*Mentor: Dr. Pamela Johansen*)

Michelle Goforth
Alexis Tracy

ENHANCING PRESCHOOLER'S EMOTION KNOWLEDGE OF ANGER AND DISGUST

The purpose of the study was to determine whether or not preschool children can accurately identify the emotions of anger and disgust when given context dependent emotion information, such as emotional facial expressions and emotion stories. Participants included 39 3- to 5-year-old children from a preschool in northern California. The intervention consisted of exposure to emotion story books, props, and facial expressions depicting anger and disgust during circle time for 10 days; teachers also modeled effective strategies for regulating each emotion. Results indicated that there was a statistically significant increase in emotion identification for disgust but not for anger. (*Mentor: Dr. Gail Walton*)

Dejah Harris

PARENT AND CHILD PERCEPTIONS OF PARENTING BEHAVIORS IN RELATION TO ATTACHMENT

The purpose of this study was to examine parents' and child's perception of parenting behaviors in relation to children's attachment. Using a mixed methods design, quantitative survey and qualitative interview data of co-parenting consistency, parents' discipline consistency, child attachment patterns and relations with parent, and parental monitoring were collected and analyzed from 92 mothers, fathers, and their school aged child. Results show that children's perceptions of their relationships with their parents and parents' parenting styles were related to child attachment to both parents. Parent report of their parenting was not related to the child's report or perception of their parenting. Implications for practice indicate that children's perceptions of their parent's parenting and their relationships with their parents are more predictive of attachment patterns than parents' report of their parenting. (*Mentor: Dr. Diana Shepherd*)

BMU 303

Moderated by Dr. Jesse Dizard

Avery Beck
Sydney Kerkhove
Kimberly Ornellas

“WE ARE STILL HERE, TOGETHER” MECHOOPDA MAIDU DOCUMENTARY FILM PROJECT

The Mechoopda Maidu Film Project is an anthropological documentary that highlights cultural sustainability and explores the rich cultural history of the Mechoopda Maidu in Chico, California. It examines the relationships between the Mechoopda Maidu, John Bidwell and other frontier settlers, Chico State University and the Chico community. This documentary project will act as a teaching tool for future generations of students, Chico community members, and Native American children who can see and hear their elders talk about the past, present, and future. *(Mentor: Dr. Jesse Dizard)*

Sara Kronenberg
Santy Gray

FOR THE LOVE OF DANCE: THE ANTHROPOLOGICAL IMPLICATIONS OF DANCE IN CHICO, CALIFORNIA

This project considered the role that dance plays in the lives of young people in Chico today. Using the methods of ethnographic film, we explored different styles of dance from around the world as expressed in people living in Chico. Different dance styles allow dancers to take part in the rituals of a culture that is different from their own. It allows physical expression and a connection between movement, music, and emotion. This multimedia presentation will include clips from an upcoming ethnographic documentary and anthropological writing. *(Mentor: Dr. Brian Brazzéal)*

Cori Amberger
Erin Gillette
Jake Pluim

SACRED STONES: LIFE AT A TRAPPIST MONASTERY

This project considers the role of history in the daily life of the Cistercian monks in the Abbey of New Clairvaux. Using anthropological methods, we conducted interviews and engaged in participant observation with the monastic community. The monks' connection to their European Cistercian past has led them to begin reconstructing a Spanish monastery on California soil using the original stones. The results of this research will be presented in the form of an ethnographic documentary examining the lives of Trappist monks in our North State community. *(Mentor: Dr. Brian Brazzéal)*

Jacques Peltier
Maiada Regehr

GRAIN BY GRAIN: EXPLORING BUDDHISM IN CHICO

This project considered how current Buddhist practices in our North State community reflect on the Tibetan cultural heritage. What are current practitioners doing to pay homage to this tradition? We explored their religion using ethnographic film. We conducted interviews and engaged in participant observation with local Buddhist practitioners. We found that the people who saw the mandala created by the Venerable Losang Samten experienced spiritual upliftment and a feeling of peace. The practice of Buddhism is directed towards the alleviation of suffering through compassion. *(Mentor: Dr. Brian Brazzéal)*

Avery Beck
Bianca Hernandez
Andrew Munson

OPEN THE GATES: A STUDY OF NORTH STATE DRUIDRY

How is Druidism practiced today, and how does it define a community? Using visual anthropological methods we captured the Feather River Grove's ceremonies and interviewed individual members. We were able to see how the religion affected their daily lives and the decisions they made. We found that an ideology of environmental stewardship united a community with a wide variation of religious beliefs. We will be presenting our findings of the local Druid group and their struggles to practice their religion in an environment defined by Judeo-Christian traditions. *(Mentor: Dr. Brian Brazzéal)*

BMU 210

Moderated by Dr. Matthew Thomas

Margaret Dean

RECOVERING ADDICTS' IDENTITY AND EXPERIENCES WITH THE 12-STEP MODEL

This study focuses on Alcoholics Anonymous and how recovering addicts in recovery perceive their experiences using the 12-step model. Drawing data from seven qualitative interviews, the study's purpose is to better understand the experiences of those who choose 12-step recovery groups as the primary means of addressing their addiction. This study does not focus on addicts' various dependencies prior to seeking treatment, but rather on how 12-step group processes impact the individual's perception and sense of self. Important factors include socialization processes within AA, the existence of a social hierarchy within groups, and identity salience. *(Mentor: Dr. Janja Lalich)*

Mallory Brown

HO! FOR OREGON: A GENDER PERSPECTIVE ON OREGON TRAIL EMIGRANT PERCEPTIONS OF NATIVE AMERICANS

Between 1830 and 1870 thousands of men, women and families set out for the American west along the Oregon Trail, braving harsh weather conditions, sickness, frequent injury and the threat of Native American attacks. What did these men and women write in their diaries and letters about the Native Americans they encountered and what does it illustrate concerning gender perspectives in the changing landscape of nineteenth-century America? Although varied in length and content, emigrant women and men's writings of Native Americans were remarkably similar. Gender did not play the most significant role in shaping emigrant's perceptions of Native Americans; instead, geographic location, tribal personalities, and overland folklore were the fundamental influences contributing to the manner in which diarists described their experiences. *(Mentor: Dr. Guy King)*

Jon Fournier

PARALLELS WITHIN THE DEEPER REALMS OF HUMAN EXPERIENCE: EXPANSIVE AND TRANSCENDENT CORRELATES OF THE GRATEFUL DISPOSITION

This study asked whether individuals with a higher natural tendency toward gratitude are more likely to have "peak experiences" of momentary transcendence which involve awe, bliss, or appreciation of beauty. Questionnaire measures of mystical experiences, aesthetic receptivity, dispositional gratitude, and five major personality traits were completed by 153 psychology undergraduates, who also rated a series of natural scenes for visual appeal. Significant correlations were found between dispositional gratitude, personality traits, and peak experience indicators. This study broadens the applicability of the personality trait of gratitude to transcendent states and peak experiences. *(Mentor: Dr. Lawrence Herring)*

Kerrie Lione

EXPERIENCES OF RELIGIOUS GAY AND LESBIAN CONGREGATION MEMBERS

Using an inductive qualitative approach, this study provides an in-depth look at the ways in which gays and lesbians manage the intersection of religious identity and sexuality. With religious individualism as a foundation and drawing on data from 7 face-to-face interviews, this study examines the necessity for homosexual churchgoers to negotiate with religious values in order to successfully form a sense of identity that is reflective of both the individual's sexual preference and religious values. This includes the process of becoming legitimate members of the congregation while maintaining full identity expression. These personal narratives unveil various coping techniques and identity-formation strategies that can be used to effectively maintain dual, and often conflicting, identities. Contributing to prior research on religion and sexuality, and the construction of identity, this study illuminates the de-centering of identity for religious gay and lesbian congregation members. *(Mentor: Dr. Janja Lalich)*

Teddy Aanestad
Laura Wheat

BAR DRINK SPECIALS IN CHICO: ALCOHOL, CRIME, AND RELATED ISSUES

This study, conducted by the members of the Criminal Justice Capstone Seminar (POLS 459D), investigates issues relating to alcohol sales, alcohol use, and crime in downtown Chico, CA. The central research question is: What is the relationship between bar-sponsored alcoholic drink specials and crime in Chico? In addition, we ask: Do specials change spending patterns? Do drink specials lead to great consumption of alcohol in a shorter period of time? How do drink specials affect the temporal patterns of crime? We employ data from the Chico Police Department, and also conducted a survey of students aged 21 and older to determine patterns of behavior relating to alcohol specials at bars. Findings may have an impact on larger public policy issues relating to alcohol regulation and student behavior. *(Mentor: Dr. Matthew Thomas)*

Poster Presentations

BMU Grand Ballroom

Jeff Jenkins

QUINOA AND SILVER IN SAN CRISTOBAL, BOLIVIA: WATER SCARCITY AND LOCAL LANDSCAPE CHANGE BETWEEN TWO COMPETING GLOBAL INDUSTRIES

The study investigates how global processes of resource extraction and agricultural production of quinoa have altered the landscape, especially in regard to infrastructure, water resources and migration. San Cristóbal and the surrounding hamlets are suffering from water deficiency because of competition for water between global agriculture and mining. The grano del oro is one of the few plants to survive in this hyper-arid and saline environment. The recently activated San Cristóbal silver mine is taking water from the aquifer that global quinoa farmers need if they want to expand or continue production. *(Mentor: Dr. Jacquelyn Chase)*

Shannon Beveridge

STAYING AFLOAT: BANNING ALCOHOL ON THE SACRAMENTO RIVER

Every year college-aged students come from all over to participate in the summer tradition of floating down the Sacramento River on Labor Day weekend. The crowd size has grown exponentially over the years, putting a major burden on local law enforcement and on the River's ecosystem. Local governments in both Glenn and Butte Counties have joined forces with CSU Chico, California Department of Fish and Game and California Department of Parks and Recreation to mitigate the effects the floaters are having on the river. Their goal is to place a ban on the consumption of alcohol during the holiday weekend on the stretch of the river most commonly floated. This paper will identify the goals of local governments and law enforcement opinion on the matter. *(Mentor: Dr. Jacquelyn Chase)*

Rebecca Klein

COMING OUT IN A CHRISTIAN CONTEXT

I studied how religion affects the coming out process of GLBTQ-identified people. I conducted loosely-structured, face-to-face interviews with gay, bisexual and lesbian people who were raised in Christian households. My analysis reveals that they went through eight steps in the process of reconciling their sexual orientation with their religion, including: feelings of distress, rejecting religious teachings about sexual orientation, and reconciling religion with sexual orientation or rejecting religion. Interestingly, the main difficulties these participants had in this process stemmed from struggles with their own ideas and beliefs, not acceptance from others. *(Mentor: Dr. Liabna Gordon)*

Nikolas Bazurto

EXPERIENCES OF UN/UNDEREMPLOYED PERSONS DURING AN ECONOMIC CRISIS

This study reports on the experiences of six Butte County residents with respect to the impact that un/underemployment has upon their lives. The research was conducted by using loosely structured interviews that lasted from about 40 minutes to nearly three hours in length. The research focuses on the processes that the participants experienced as they went from being without work to their current states, including the participants' perceptions of others who receive unemployment benefits. *(Mentor: Dr. Liabna Gordon)*

Steven Caldwell
Maryam Fallahi

ARE LEGAL, HERBAL, AND NATURAL DRUGS REALLY SAFE?

Among U.S. adults who take prescription medications, 18.4% report a concurrent use of at least one herbal, supplemental, or natural drug. However, use of such drugs is not as safe as many people might think for several reasons: First, the information regarding the content of these drugs is not always provided. Also, many of these drugs have adverse interaction effects. Finally, some natural drugs can be harmful since they possess chemical drug-like properties and can start the same reaction patterns as drugs do. Through a poster presentation and a few interactive demonstrations, we aim to refute the common misconception that all legal, herbal, and natural drugs are safe. *(Mentor: Dr. Penelope Kuhn)*

Steve Caldwell
Alan Cook

DO DRUG LAWS PREVENT ADDICTION?

The administration of drug laws on addiction and drug use has not resulted in a decrease in addiction over time. Failures of drug laws include the conflict between Great Britain and China over the opium trade in the mid 1800s, Prohibition in the United States from 1920 – 1933, and more recent laws such as the 1970 Controlled Substances Act which added drugs to schedules and established penalties for drug possession and trade. This presentation will examine the connection between drug use/abuse and the implementation of drug laws. *(Mentor: Dr. Penelope Kubn)*

Neil Jacobson
Adelaide Kreamer

IS ONCE ENOUGH? A NEUROBIOLOGICAL EXPLANATION OF ADDICTIVE POTENTIALS FOR PSYCHOTROPIC SUBSTANCES

This presentation debunks the popular belief that using a drug only once is insufficient to result in addiction. We will present the dependence liabilities associated with alcohol, crack cocaine, nicotine, methamphetamines, and Oxycontin. Each substance addressed belongs to a different drug class, which has a specific mechanism of action, resulting in differing effects on the brain. Each share in common the direct or indirect stimulation of the ventral tegmental and nucleus accumbens dopamine pathway, potentially resulting in addiction. An interactive game will demonstrate that indeed the use of a drug only once can create an addicted brain. *(Mentor: Dr. Penelope Kubn)*

*Individuals contributed equally

Alyssa Cozine
Leah Tallchief

THE “HOLE” DRUG SITUATION

With regard to myths concerning addiction and abuse, the belief that drug use can cause holes to form in the brain is one of the most persistent. Some prominent figures have even made a career out of promoting the myth by presenting SPECT scans of addicts' brains as alleged proof of this phenomenon. This presentation debunks the myth and reports on facts pertaining to this belief, including questioning the validity of using SPECT scans per se to diagnose these "holes" in the brain. *(Mentor: Dr. Penelope Kubn)*

Shannon Anthony
Debbie Magreehan

THE ONE-WAY PATHWAY TO ADDICTION

A widespread drug myth is that you can quit whenever you want and not be addicted. Most people may believe this myth because they do not understand that there is a difference between being dependent and being addicted. Dependence is a chemical imbalance in the brain that can be reversed. Addiction is more than an imbalance; it involves a reward pathway from the Ventral Tegmental Area to the Nucleus Accumbens. It may take a while for this pathway to form a strong connection, but once these connections are in place, they are permanent and the person can no longer just quit. *(Mentor: Dr. Penelope Kubn)*

Lesley Allenby

IDENTIFYING HEALTH DISPARITIES AMONG NATIVE AMERICAN MIDDLE SCHOOL STUDENTS IN NORTHERN CALIFORNIA: COMPARING RATES OF PHYSICAL ACTIVITY AND OBESITY

Reducing health disparities among minority populations represents a critically important national public health goal. Using data to accurately identify the most vulnerable populations and the health behaviors that most contribute to disparate health outcomes represents a critical first step toward achieving this goal. This study used cross-sectional surveys to compare groups of Northern California rural and suburban Native American middle school students' BMI's and rates of physical activity to national data. Results indicate this sample of Native American students experience disproportionate rates of physical inactivity and obesity. These findings suggest public health opportunities related to a) prioritizing funding and services designed to promote physical activity and reduce obesity among Native American middle school students in Northern California, and b) reducing health disparities and improving health outcomes associated with this priority population. *(Mentor: Dr. Michael Mann)*

Susan Deutscher
Valerie Flatt
Lisa Korstad

EMOTION AND MEMORY

This study investigated reaction time differences to positive and negative stimuli across three sensory modalities: smell, touch, and sound. We found that people reacted quickly to negative stimuli, especially negative smell and sound. Interestingly, people reacted more quickly to negative sound than to negative smell. Positive and neutral stimuli had similar reaction times, which were longer than the negative ones. *(Mentor: Dr. Brian Oppy)*

Melissa Fair
Victoria Heberton
Cathy Yoo

COMPARISONS OF COLLEGE CULTURE BETWEEN UNITED STATES AND CHINA: A CROSS- SECTIONAL STUDY OF CSU CHICO AND LINYI UNIVERSITY

This poster presents data on Chinese students and Chico State students with respect to differences in academics, hobbies, background information, and extracurricular activities. The poster will display among the most interesting and drastic comparisons between the trends of Chico State students and the Chinese students. The study also explores the extent to which students in both locations involve themselves in school and extracurricular activities.

(Mentor: Dr. Chunyan Song)

Zorin Wojcik

ALEXANDER THE GREAT: MAJOR BATTLES ALONG HIS MARCH OF CONQUEST

As part of a classroom assignment in Advanced Cartography, students were asked to map a topic of their choice showing progression through time, such as a spread of a disease or a journey. My map shows the advances made by a historic army. Creation of the map required research into the topic and the making of cartographic decisions geared toward appropriate design of the map, including decisions concerning color, line, projection, and map title, to name a few.

(Mentor: Steve Stewart, MA)

Robert Bruno

CHRONIC WASTING DISEASE IN DEER AND ELK

As part of a classroom assignment in Advanced Cartography, students were asked to map the dispersion of a microorganism of their choice, such as a disease, pest, or beneficial yeast. My map shows how a pathogen is affecting certain wildlife, reflecting research into the spread of this pathogen and the many cartographic decisions needed to create an appropriate design of the map: color, line, projection, and title, to name a few. A framed print of the completed map will be on display at the Gateway Science Museum until May 30, 2011. *(Mentor: Steve Stewart, MA)*

Curtis Page

CULTURAL AND HISTORIC BACKGROUND OF THE NORTH FORK FEATHER RIVER

As part of a classroom assignment in Advanced Cartography, students were asked to map a topic demonstrating progression of a disease or journey through time. Characterizing the historic progression of a local stream this project required research into the railroad, highways, cattle timber, and gold prospecting in the Feather River canyon. In addition, completion of the map required making many cartographic composition decisions concerning the appropriate design of the map including decisions about color, line, projection, and map title. *(Mentor: Steve Stewart, MA)*

Matt Galdin

KILLER BEES INVADE THE NORTH

As part of a classroom assignment in Advanced Cartography, students were asked to map the dispersion of a microorganism of their choice, such as a disease, pest, or beneficial yeast. My map shows the introduction and dispersion of Africanized honey bees. The project required research into the spread of honeybees and required making many cartographic decisions concerning appropriate design of the map, including decisions about color, line, projection, and map title. A framed print of the completed map will be on display at the Gateway Science Museum until May 30, 2011. *(Mentor: Steve Stewart, MA)*

Elisabeth Towers

PATHOGEN DIFFUSION: CHEESE MAKING THROUGHOUT THE AGES

As part of a classroom assignment in Advanced Cartography, students mapped the dispersion of a disease, pest, or beneficial yeast. My map shows how a pathogen has historically been used to make edible cheese for human consumption. Constructing the map required applying research findings concerning the manufacture of cheese, making many cartographic decisions geared toward appropriate design of the map, including decisions about color, line, projection, and map title. A framed print of the completed map will be on display at the Gateway Science Museum until May 30, 2011. *(Mentor: Steve Stewart, MA)*

David Hagens

SPREAD OF PHYTOPHTHORA RAMORUM: SUDDEN OAK DEATH IN CALIFORNIA

As part of a classroom assignment in Advanced Cartography, students were asked to create an interactive map programmed using Flash showing progression through time, demonstrating the spread of a disease or a journey. My map shows the spread of a pathogen in an interactive, time lapse format. This project required research into the disease, and the use of cartographic techniques in the design of map color, line, projection, and map title. *(Mentor: Steve Stewart, MA)*

- Kirstyn Pittman **THE CURIOUS CASE OF THE ENGLISH SWEATING SICKNESS**
 As part of a classroom assignment in Advanced Cartography, students were asked to map the dispersion of a microorganism of their choice, such as a disease, pest, or beneficial yeast. Graphically representing the spread of an historic epidemic, the map reflects research into the history and spread of this disease in context of cartographic decisions geared toward appropriate design of the map. A framed print of the completed map will be on display at the Gateway Science Museum until May 30, 2011. *(Mentor: Steve Stewart, MA)*
- Deborah Dwight **WHITE-NOSE SYNDROME**
 As part of a classroom assignment in Advanced Cartography, students were asked to map the dispersion of “White-Nose Syndrome.” The project required research into this disease and its spread, plus incorporating many cartographic decisions geared toward appropriate design of the map, including decisions about color, line, projection, and title. A framed print of the completed map will be on display at the Gateway Science Museum until May 30, 2011. *(Mentor: Steve Stewart, MA)*
- Jacqueline Holmes **CURRENT AND HISTORIC RANGE OF GRIZZLIES**
 As part of a classroom assignment in Advanced Cartography in which students were asked to map a topic of their choice showing progression through time, I compared the range of grizzly bears from decades past up to the present time. Mapping grizzly bear activity required research into the history and habitat of this animal, and making many cartographic decisions including, but not limited to, appropriate design of the map color, line, projection, and map title. *(Mentor: Steve Stewart, MA)*
- Sarah Cox
 Jennifer Garrison
 Rebecca Mahan
 Emily Scherschligt **¡ATENCIÓN!: THIS IS YOUR BRAIN ON BILINGUALISM**
 The advantages of bilingualism have been well explored in the field of psychology. For our project, we have focused on advantages in low-level cognitive tasks, specifically in selective attention and task switching. All of the research we have compiled points to significant advantages for bilinguals in these areas. This advantage was apparent for various levels of bilingual proficiency, suggesting that learning a second language can improve performance on these low-level cognitive tasks regardless of when the second language is learned. *(Mentor: Dr. Martin van den Berg)*
- Muyassar Al-Rifai
 Lindsay Holt
 Manfred Murillo
 Ian Snider **GENDER DIFFERENCES IN GAMBLING STYLE**
 This research examines the differences and similarities between men and women’s gambling and betting behavior. The research summarizes a review of the literature focusing on psychological, socio-cultural, and evolutionary explanations for men’s betting tendencies; the psychological and socio-cultural explanations for women’s betting tendencies; and the biological and neurological similarities occurring in both gender’s brains when engaging in gambling practices. *(Mentor: Dr. Martin van den Berg)*
- Zack Matthews **HOW DOES MEDITATION AFFECT THE BRAIN?**
 The current research focuses on the effects of meditation on the brain. While practicing meditation, experienced participants are able to control, regulate, and focus their attention thereby controlling their emotions. During meditation different activity occurs in the prefrontal cortex and the insula when compared to non-meditative states. Effects of meditation continue to be the subject of new research, revealing promising results and showing that different areas of the brain are involved. *(Mentor: Dr. Martin van den Berg)*
- Kristina Hernandez
 Mackenzie Morris
 Maria Rivera
 Stephanie Winger **HOW DOES OUR PERCEPTION OF BABY FACES AFFECT THE WAY WE SHOULD CARE FOR THEM?**
 An individual’s reaction to the appearance of an infant is critical for social cognition, the thought processes of understanding and interacting with other people. A review of the literature was conducted in order to answer the question of whether the way individuals perceive baby faces affect the care that a baby may receive. Attractive babies are given more attention than unattractive babies, as seen in the behavior of mothers, parents and prospective adoptive parents. Potential life-long implications of the “attractive baby” bias is discussed. *(Mentor: Dr. Martin van den Berg)*

Leela Dunn

NEED FOR COGNITION AND PROMISCUITY IN ADVERTISING

This research project explores the relationship between need for cognition and the effectiveness of promiscuity in advertisement. Need for cognition is determined by a Need for Cognition scale, and the effectiveness of promiscuity in advertisements is determined by the amount of information recalled after viewing a magazine advertisement. It was found that people with a low need for cognition respond more to promiscuous advertisements because the promiscuous content grabs their attention. People with a high need for cognition do not tend to show a preference for promiscuity in advertising, but instead the fit between the advertisement and the intended message is what determines their response. *(Mentor: Dr. Martin van den Berg)*

Erika Miller
Jessica Mishler
Nicholaus Ryan
Diona Wikum

TO FORGIVE OR NOT TO FORGIVE, THAT IS THE QUESTION

How do individuals decide to forgive their partners transgressions? An analysis of empirical research reveals that individuals who use forgiveness as a strategy eliminate angry ruminations by limiting the cognitions that escalate emotional responses. This is mediated by environmental factors such as frequency of occurrence, an apology offered, and method of discovery. Implications for individuals who use forgiveness as a coping strategy have increased physical and psychological health. *(Mentor: Dr. Martin van den Berg)*

Samantha Congdon
Mercedes Montonini
Madison Leffel

BACK TO THE FUTURE: FLASHBACKS YOU FEEL

In this project we researched how memories evoke emotion, focusing on the structures and functions of the brain that deal specifically with emotions and memories. Elicited by previously encoded retrieval cues, retrieval from long-term memory can often result in an experienced “flashback.” When we experience a flashback we not only experience the memory but also the emotion originally encoded with the event. *(Mentor: Dr. Martin van den Berg)*

Jennifer Christian
Kristina Hernandez

MINDFULNESS PRACTICE AND NEUROPLASTICITY

Mindful meditation has been growing in popularity in western societies and as a use for the treatment of depression, anxiety, substance abuse, ADHD, and many other psychological disorders. Research has shown that the practice of Mindfulness techniques can produce changes in various parts of the brain, including the brain stem, the hippocampus, and the amygdale. These changes are important to understand how Mindful practice can be used as a treatment for psychological disorders. *(Mentor: Dr. Eddie Vela)*

Thomas Parker

PARTICIPATORY DEMOCRACY AND SELF-ESTEEM

Self-esteem is thought to be correlated with self-efficacy. In order to test this hypothesis, prior to and after the Chico State Town Hall Meeting I will administer the General Self-Efficacy Scale and the Rosenberger Self-Esteem Scale to participants. Analysis will assess the degree to which self-efficacy and self-esteem increases following the town hall meeting. Policy implications concerning the benefits of holding community forums will be discussed. *(Mentor: Dr. Lori Weber)*

Kimberly Clopper
Lauren Johnson
Dallas Madison
Erika Williams

HOW DO COUPLES DECIDE TO MOVE IN TOGETHER?

An estimated 50 to 60% of couples in the U.S. are choosing to cohabitate prior to marriage. Interestingly, the associated risks of cohabitation are not abating despite its prevalence. How couples choose to live together and what factors contribute to their decision making process is examined in this presentation. Understanding how couples decide to cohabitate may enable others to avoid poor relational outcomes. *(Mentor: Dr. Martin van den Berg)*

RECEPTION

*Please join us for conversation and refreshments in
Celebration of our students' achievements.*

BMU Grand Ballroom

7:00 p.m.

Congratulatory Remarks by

*Dr. Gayle E. Hutchinson, Dean
College of Behavioral & Social Sciences*

