

Dr. Fred Janzen

Dr. Fred Janzen currently teaches in the department of ecology, evolution, and organismal biology at Iowa State University. He also heads the Janzen Lab of Ecological and Evolutionary Herpetology and has been published in many peer-reviewed journals including the *Journal of Evolutionary Biology* and the *Herpetological Review*.



Today, Dr. Janzen will speak on *Climate Change, Sex Determination, and Turtles: A Natural History and an Unnatural Future*. Exceptional climate changes and rapid loss of biodiversity exemplify two major elements of non-sustainable use of global resources. In this presentation, I will provide insight into some of the joint social and biological ramifications of these processes by highlighting their current and future impact on an iconic constituent of our biota. Although almost universally adored and an important component of many cultures and religions, the vast majority of turtle species are nonetheless already globally imperiled. The plight of turtles is, unfortunately, enhanced by certain nearly-unique elements of their biology, including the exquisite sensitivity of their sex determination to variation in temperature. This presentation will focus on research in my lab that explores the underpinnings of this temperature-dependent sex determination in light of expected climate changes and how our work can inform conservation and management actions.

Sixth Annual
Morningside College

Palmer Student Research Symposium

Wednesday, April 1, 2009



*The Morningside College experience cultivates
a passion for life-long learning and a dedication
to ethical leadership and civic responsibility.*



*Sixth Annual Morningside College
Palmer Student Research Symposium Schedule*

Wednesday, April 1, 2009

Opening Remarks 7:45-8:00
President Reynders and Dean Deeds SC 162

Poster Session Ia 8:00-9:00
Empirical Research SC Hallway

A. Birth Order Effects on Attitudes/Behaviors and Internal/External Locus of Control

Andrea Jenson

The present study examined the effects of birth order on locus of control and relationship attitudes/behaviors. Fifty-eight college-aged participants (18 men, 40 women) completed survey assessments. There was no significant difference among birth order related to Internal/External Locus of Control or the FIRO-B wanted and expressed inclusion, control, and affection.

Faculty Sponsor: Dr. Susan Burns

B. The Relationship Between Birth Order and Anxiety

Hollie Vaughan

Morningside College students volunteered to participate in an 11 question survey in order to study the relationship between birth order and anxiety. The experimenter believed that first-borns would be more anxious than last borns.

Faculty Sponsor: Dr. Larry Sensenig

C. Family Birth Order's Impact on Academic Success

Laura Gildemeister & Kristin Struss

The study "Family Birth Order's Impact on Academic Success" is a predictive validity study that takes a look at whether or not birth order within a family predicts academic success in a student's college career. The experimenters hypothesized that the youngest children would typically have the most success in college.

Faculty Sponsor: Dr. John Pinto

Poster Session Ib 8:00-9:00
Empirical Research SC Hallway

E. Importance of Hand Washing

Anna Ahrens

Proper hand washing is important to stop the spread of disease, however many learning disabled students do not know how to properly wash their hands. This study tested whether learning disabled students, by doing an experiment on hand washing, gained proper knowledge on their hand washing skills and importance.

Faculty Sponsor: Dr. Rachel Robson

F. Why does a Curveball Curve?

Wade Morrison

I will be presenting the results of a numerical simulation of the flight of a curveball. I will show that the flight of a pitched ball is the result of gravity drag, and the Magnus force.

Faculty Sponsor: Dr. David Slaven

G. PLINKO Anyone?

Margo Stanforth, Jen McWashington, Jessica Rix, Brad Penning & Garret Allen

Plinko is a game of chance made popular by The Price Is Right. Contestants drop a chip through a maze of pegs. Depending on which slot the chip lands in, prizes are won. We will mathematically compute the probabilities associated with this game and the expected winnings.

Faculty Sponsor: Dr. Eric Canning & Dr. Brenda Mammenga

H. Novel Method of Attaching an Acyl Group to an Aromatic Ring

Cara DeStigter, Justin Moser & Autumn Bartel

A palladium complex and a vitamin B1 analog are used to catalyze the substitution of a halogen or triflate group on a benzene ring by the acyl group from an aldehyde.

Faculty Sponsor: Dr. Larry Martin

Panel I **8:00-9:00**
Non-Empirical Research **SC 007**

Selected Topics in Indian Popular Culture (Session 1 of 2)

Students from History 222: Asian Civilizations

Students will present their small group research projects on selected topics in contemporary Indian Popular culture.

Faculty Sponsor: Dr. Greg Guelcher

Oral Session I **8:15-9:00**
Non-Empirical Research **SC 163**

1. 8:15-8:30 Ephesians 5:22 ‘Wives Submit’

Nick Grove

An in-depth discussion of one of the most controversial Biblical passages ‘Wives submit’ in Ephesians. Through Greek translations and scholarly evidence, I dive into the true meaning behind this command. I conclude that the meaning of the passage is not what is often taught by many churches.

Faculty Sponsor: Dr. Jessica DeVega

2. 8:30-8:45 Active Learning Pedagogy

Sean Howell

An active learning approach to advertising and other business classes, not only improves retention in students, but creates a more responsible student who is capable of handling real-life situations.

Faculty Sponsor: Dr. Pam Mickelson

3. 8:45-9:00 The Branding of Barack Obama

Andrew Loffswold

Three words- change, hope, and progress- and numerous artistic images emerged as taglines and logos in the promotion and sale of the presidential product – Barack Obama. This research examines the branding of Barack Obama and America’s purchase of a belief and theme.

Faculty Sponsor: Dr. Pam Mickelson

Oral Session II **8:15-9:00**
Non-Empirical Research **SC 163**

1. 8:15-8:30 Les Banalités by Francis Poulenc – Anything but Commonplace

Britt Gebhardt

Francis Poulenc composed a group of five songs he entitled Les Banalités using poems of Guillaume Apollinaire as text. In Les Banalités, Poulenc transports the listener to imaginary places like the city of Orkenise and real places like Paris and the Moorlands of Belgium.

Faculty Sponsor: Dr. Gail Dooley

2. 8:30-8:45 Using the Family to Prevent the Flaws of Child Development from Occurring

Brenda Chord

Children are faced with traumatic situations daily. Some are unpreventable however many of these traumas are preventable. A review of the literature reveals that the family has fallen short of its intended mark. The family structure should be the foundation holding and supporting kids to ensure the best developmental progression.

Faculty Sponsor: Dr. Kim Christopherson

3. 8:45-9:00 Military Deployment, Coping Skills, and Their Effects on Children

Karen Grabowski

The primary focus of this literature review was to study the effects of military deployment on children and how the remaining caregiver’s coping skills affect the child. The effects of the remaining caregiver’s coping skill are compared with the coping skills used by single civilian parents.

Faculty Sponsor: Dr. Kim Christopherson

Panel II **8:15-9:00**
Non-Empirical Research **SC 163**

Four Perspectives on Jane Austen’s *Pride and Prejudice*

Laura Homan, Bea Merchant, Amanda Franzen & Cassie Dickerson

One student paper examines how the novel created a frenzy of sequels, prequels, and fan fiction. Another explores the reading challenges faced by English language learning students. Another critiques the novel as the ultimate anti-romance. The last explores how Jane Austen’s own sisterly bond was used to depict the relationship between Elizabeth and Jane.

Faculty Sponsor: Dr. Marty Knepper

Panel III **9:15-9:45**
Non-Empirical Research **SC 165**

Interpretations of Jane Austen's *Persuasion*, *Mansfield Park*, *Sense and Sensibility* and *Emma*

Phil Lieder, Adrianna Radosti & Audrey Hantla

Two interpretations of *Persuasion* explore the influences on Austen of Romanticism and investigate the challenges of characterizing the very silent Anne Elliott on film. The last study describes the fictional portrayals of Jane Austen's silent heroines in contrast to traditional talkative characters.

Faculty Sponsor: Dr. Marty Knepper

Panel IV **9:15-10:00**
Non-Empirical Research **SC 007**

Selected Topics in Indian Popular Culture (Session 2 of 2)

Students from History 222: Asian Civilizations

Students will present their small group research projects on selected topics in contemporary Indian Popular culture.

Faculty Sponsor: Dr. Greg Guelcher

Oral Session III **9:15-10:15**
Empirical Research **SC 162**

1. 9:15-9:30 Attitudes toward Foster Children

Sabrina Higgins

Attitudes toward foster children were compared with belief in a just-world. Results from the Foster Child Attitude Scale and the Belief in a Just-World Scale are hypothesized to be negatively correlated. In addition, attitudes toward foster children will be compared to attitudes toward non-foster children. Results will be discussed.

Faculty Sponsor: Dr. John Pinto

2. 9:30-9:45 Effect of High Fat Diet and Schedules of Reinforcement on Lever Pressing Behavior in Long-Evans Rats

Tareyn Moss

Operant lever pressing was investigated using sixteen Long-Evans Hooded rats using a 2 (diet conditions) X 2 (fixed ratio schedules) repeated measures design. All rats are expected to press less on FR-1 than on the FR-10 schedule. Experimental high fat rats are expected to press less on FR-10 than control group rats.

Faculty Sponsor: Dr. Larry Sensenig

3. 9:45-10:00 Understanding the Vote: Political Ideology, Gender Ideology, and Party Affiliation

Jeremy Bauer

To examine relationships between political party affiliation, conservatism liberalism, masculine and feminine personality traits, and hyper-gender ideology, students at a small private liberal arts college were given the Conservatism of American Public Opinion scale, the Bem Sex Role Inventory, and the Hyper-Gender Ideology Scale to complete. Several interesting correlations emerged.

Faculty Sponsor: Dr. Susan Burns

4. 10:00-10:15 Distraction and Mental Rotation

Christopher Nordstrom

Mental rotation was investigated under the conditions of participants being distracted or not distracted. Gender was also examined. A significant effect was found for distraction: participants performed best working alone followed by a non-distracting confederate present, and then with a distracting confederate. No interaction was found between gender and distraction.

Faculty Sponsor: Dr. Susan Burns

Panel V **9:15-10:15**
Non-Empirical Research **SC 007**

I'm With the Band: Popular Music in the Traditional Secondary Music Curriculum

Kasey Farrell, Than Chesher, Megan Beery, Emily Cox & Nick McGraw

Our research will explore the lack of connection between what is being taught in school music programs and the music in which a majority of students are interested and involved. Focus will be placed on current philosophy regarding what constitutes quality music, describing existing programs, and providing implications for music educators.

Faculty Sponsor: Jill Wilson

A. Morningsiders study Ecotourism Down Under

Alesha Arnold & Bailey Johnson

The poster presentation will illustrate research through photographs taken in Australia in May of 2008. Ecotourism was the focus of the study tour. Student will illustrate the literature reviewed and firsthand knowledge of sites while in Australia. The Great Barrier Reef will be the highlight of the poster presentation.

Faculty Sponsor: Dr. Pam Mickelson

B. Area/Perimeter Relationships of Prairie Patches in the Loess Hills of Western Iowa

Patrick Oxendale

The purpose of this study was to use a hand-held GPS unit to map selected prairie patches in Stone State Park and Mt. Talbot State Preserve. Areas determined with GPS receivers were compared to recent aerial photos. Area/perimeter relations and fractal dimensions were also calculated.

Faculty Sponsor: Dr. Jim Stroh

C. The Madagascar Hissing Cockroach: A New Model for Learning Insect Anatomy

Danny Goodding & Maggie Fast

We propose that the Madagascar hissing cockroach (*Gromphadorhina portentosa*) should be used as a model for learning and teaching the anatomy and physiology of insects. Here, we examine the pros and cons of using this species as well as the current standard, the American cockroach (*Periplaneta americana*).

Faculty Sponsor: Dr. Bill Heyborne

D. Comparison of Small Mammal Population Characteristics in Woodlands and Prairies

Ryan Oetken, Emily Peterman, Brett Miner & Justin Flammang

A comparison of density and diversity of small mammals was initiated in forest and grasslands in Mt. Talbot Preserve and Stone State Park. There was a significant difference ($P < 0.01$) between mean mammal density in the forest and grasslands and more species of mammals were captured in the prairie.

Faculty Sponsor: Dr. Jim Stroh

E. Factors Affecting Empathy Levels Based on Subjection to Differing Levels of Homophobic Behavior

Katherine Goss

Morningside College students were randomly assigned one of two scenario displaying differing levels of homophobic behavior before filling out an Empathy Scale to find out if the scenario affected empathy levels. A two way between subjects ANOVA indicated a main effect of sex of participant and scenario, but no interaction.

Faculty Sponsor: Dr. Kim Christopherson

F. Objects or Relationships, What Makes People Happy

Ashley Danner, Breanne Evans & Amie Malcom

In order to determine what factors affect people's happiness, participant viewed a PowerPoint of relationship pictures and object picture. A Likert scale was used to determine happiness rankings of each picture presented. A mixed-design ANOVA showed college students rated relationship pictures as producing greater happiness than object pictures.

Faculty Sponsor: Dr. Susan Burns

G. Predictive Validity: Alcohol Consumption & GPA

Maureen Weinmeister & Rachel Sailer

A brief survey was administered to Morningside College students asking for the number of alcoholic beverages consumed per week and cumulative GPA. Researchers believe the number of alcoholic beverages consumed per week was a valid predictor of college GPA. Results indicate there is a positive correlation at a .013 significance level.

Faculty Sponsor: Dr. John Pinto

H. Creating an Effective Professor Performance Evaluation Tool

Barbara Vail

The practice of administering professor evaluations at course end offer little incentive to respondents to provide meaningful feedback and offer professors no opportunity to be evaluated on their modified teaching techniques by those whose feedback prompted the modification. Ongoing meaningful feedback practices would benefit students, professors and the college collectively.

Faculty Sponsor: Molly Williams

Oral Session IV **10:30-11:15**
Non-Empirical Research **SC 165**

1. 10:30-10:45 Professional Burnout and Nursing

Bryan Hansen, MikeyAnne O'Sullivan & Kelsey Ploen

A literature review in which three factors contributing to burnout will be discussed, including the nurse-client relationship, work environment, and personality factors. Recommendations will also be made to implement new policies or procedures to reduce the rates of burnout among nursing staff.

Faculty Sponsor: Dr. Patricia Graham

2. 10:45-11:00 A Closer Look at the Nursing Shortage in the U.S.

Kristi Tighe, Katie McGuire & Trang Nguyen

The nursing shortage is becoming an increasing problem in the United States. By 2020 it is expected that the shortage will rise to over 800,000 nurses. Research indicates specific interventions to prevent a nursing workforce health crisis.

Faculty Sponsor: Dr. Mary Kovarna

3. 11:00-11:15 Pain Management in Circumcision

Brittany Thompson, Kayla Weerheim, Sarah Garret & Rachel Held

Neonatal circumcision is one of the most common surgical procedures in the United States. This study examines the literature about pain control for neonatal circumcision. The research evaluates various methods and evidence for pain control during circumcision as well as the ethical issues associated with performing procedures without anesthesia.

Faculty Sponsor: Sharlene Georgesen

Oral Session V **10:30-11:30**
Non-Empirical Research **SC 162**

1. 10:30-10:45 Sex Education

Erin Koskovich & Stephanie Kirchner

Today many schools have moved towards abstinence only sex education and are no longer teaching about appropriate contraceptive use. The purpose of this research utilization project was to show the importance of including contraceptive education into abstinence based sex education program.

Faculty Sponsor: Lori Doeschot

2. 10:45-11:00 Recognizing and Preventing Suicide among Adolescents

Ashley Zevenbergen, Mindee Borrall & Nicole Branstetter

Suicide is largely preventable and the majority of people with suicidal ideation have a treatable disorder. The purpose of this research utilization project is to enhance public awareness of the risk factors, contributing conditions, and common cues that are often sent by the person considering suicide.

Faculty Sponsor: Lori Doeschot

3. 11:00-11:15 Posttraumatic Stress Disorder in Adolescents and Children

Amy Salton, Emily Heuertz & Hillary Utman

Posttraumatic Stress Disorder (PTSD) is a disorder exhibited by those who have experienced a traumatic event. PTSD is commonly overlooked in adolescents and children. The purpose of this research utilization is to analyze the review of literature, determine common causes of PTSD, and develop recommendations for this population.

Faculty Sponsor: Dr. Jackie Barber

4. 11:15-11:30 Health Beliefs and Breast Cancer Screening Practice among Minority Women Populations

Cassie Main, Brooke Potterff, Yuichi Ichinose & Nichole Goergen

The purpose of this research utilization is to utilize the Health Belief Model to discuss reasons why minority women have decreased participation in breast cancer screening activities. In addition, the outcomes of several culturally sensitive educational programs are discussed. Implementation for healthcare professionals are recommended based on research utilization findings.

Faculty Sponsor: Dr. Jackie Barber

Panel VI **10:30-11:30**
Non-Empirical Research **SC 00'**

The American Civil War: Topics in Student Research

Christina Thomsen, Kate Williams, Rachael Cooper, Adam Gonshorowsk & Brent Wojcik

We will discuss several aspects of possible research regarding the American Civil War, 1861-1865. The topics include the Franklin-Nashville Campaign of 1864, violence towards Native Americans, the effect of the Petersburg campaign on women, fortification of the San Francisco Harbor and its defense, and Spanish-American diplomacy during the war.

Faculty Sponsor: Dr. Patrick Bass

Oral Session VI

10:30-11:30

C&C Presentations

SC 002

1. 10:30 Cartoon as Caricature: How Disney Films for Children Promote Stereotypes

Sarah Ellenberger

Children form initial impressions of members of ethnic minorities based on images in popular media. One of the major sources of these pop-culture images is children's movies. This presentation will address Disney films as a potential source of harmful ethnic and gender stereotypes held by children.

Faculty Sponsor: Dr. Rachel Robson

2. 10:40 The Evils of Altruism

Michael Gruber

Altruism is commonly held as one of the greatest virtues. But altruism is a self destructive concept, and does more harm to societies than good. This presentation will examine altruism's ill effects.

Faculty Sponsor: Dr. Rachel Robson

3. 10:50 If Flags Didn't Fly: A Look at Nationalism and its Consequences

Brendan Uhl

Immigrants face a wide range of difficulties in moving to a new country. Nationalism is a strong connection with an idealistic view of one's nationality, and compounds the difficulties. If we wish to have healthy, productive immigrants, we must all do our best to detach from these superficial national identities.

Faculty Sponsor: Dr. Jeffrey Herlihy

4. 11:00 Olympics Improved Human Rights in China

Jessica Boschen

When Beijing was up for debate by the International Olympic Committee for hosting the games, the issue of human rights, as stated in the Olympic Charter, was a key point of discussion. Human rights were improved in China through involvement of the IOC, media coverage, and the opening ceremonies.

Faculty Sponsor: Dr. Heather Reid

5. 11:10 Diversity in Harry Potter

Sydney Brisco

J. K. Rowling presents diversity issues and symbols of oppression in the Harry Potter series.

Faculty Sponsor: Dr. Marty Knepper

6. 11:20 Questioning Religion, Authority, and Tradition

Kelsey Kallhoff

In this essay, I evaluate Lynn Schofield Clark's book chapter, 'Touched by a Vampire Named Angel: The Supernatural in Contemporary Teen Popular Culture.' I focus on her contentions that teens are interested in questions of good and evil but not necessarily religion, and that teens are immersed in postmodern culture.

Faculty Sponsor: Dr. Jen Moskowitz

Poster Session IIIa

10:30-11:30

Non-Empirical Research

SC Hallway

A. The Effects of Pharmaceutical Waste on Human Populations and the Environment

Erin Carrow, Briana Dietrich & Eileen Sorenson

Pharmaceutical waste is becoming a prevalent problem throughout the nation and the world. Improper disposal of pharmaceuticals is causing adverse effects in the environment and people. Educating society is one of many measures that can be taken to help minimize the amount of pharmaceuticals being released into the environment.

Faculty Sponsor: Dr. Bill Heyborne

B. Negative Effects of *Nicotiana tabacum*

Cole Wilson, Joe Lockett & Josh Curry

Tobacco, once a very productive cash crop, is known to be at the root of many environmental and economic problems throughout the world. It is one of the leading causes of deforestation, and is associated with poverty and reduced economic productivity. More importantly tobacco is dangerous to a person's health.

Faculty Sponsor: Dr. Bill Heyborne

C. Childhood Sexual Abuse and the Development of Bulimia Nervosa

Lindsey Rubel

There has been numerous research to suggest that there is a link between childhood sexual abuse and the subsequent development of Bulimia Nervosa. This presentation combines literature in support of and against this topic. Many studies show a positive correlation between childhood sexual abuse the development between Bulimia Nervosa.

Faculty Sponsor: Dr. Larry Sensenig

Poster Session IIIb

10:30-11:30

Empirical Research

SC Hallway

E. A Comparison of the Effectiveness of Two Species of Composting Worms

Adam Mathers, Tyler Armstrong, Christopher Dicks & Scott Varilek

Our study compared the composting effectiveness of red-worms (*Eisenia foetida*) and African nightcrawlers (*Eudrilus eugeniae*). We used identical foodstuffs to determine which species of worm was responsible for the most rapid composting. Then, the resultant castings were used to grow Brassica plants as a means of comparing nutritive value.

Faculty Sponsor: Dr. Bill Heyborne

F. A Controlled Study of the Effects of Road Salt on Aquatic Animals

Cody Kruckenberg & Ben Knight

We were interested in the effects of winter-time road salting on surrounding aquatic ecosystems. To do this, we studied the effects of salt toxicity on small invertebrate organisms. Our results show the even low levels of salt cannot be tolerated by our model organisms.

Faculty Sponsor: Dr. Bill Heyborne

G. The Non-target Effects of Household Chemicals on Insects

Jack Bush, Jacqueline Pauk & Kyle Hoffman

We determined the LC50 for crickets of several household chemicals. To do this, we saturated the animals' food with varying concentrations of the chemicals. Some chemicals resulted in lethality at relatively low concentrations. Although not intended to be used as insecticides, some of these chemicals might be useful as such.

Faculty Sponsor: Dr. Bill Heyborne

H. Selectivity Rado Numbers for the Equality $t_1+t_2=t_3$

Kelsey Uherka

The t -color selectivity Rado number is the least integer n that guarantee either a monochromatic or a totally multicolored solution to an equation regardless of the assignment of the t colors to the set of integers $\{1, 2, 3, \dots, n\}$. This poster explores various t -color selectivity Rado numbers for the equality, $t_1+t_2=t_3$, where $t \in \mathbb{N}$.

Faculty Sponsor: Dr. Brenda Mammenga

LUNCH BREAK

Yockey Room

11:45-12:35 Lunch for presenters, sponsors, and judges

12:45-1:35 ACAS Keynote Speaker: *Dr. Fred Janzen*:
**Climate Change, Sex Determination, and Turtles:
A Natural History and an Unnatural Future**

Oral Session VII

1:45-2:45

Empirical Research

SC 16

1. 1:45-2:00 The Foster Child Attitude Scale

Sabrina Higgins

A twenty item attitude scale measuring attitudes towards foster children was constructed. Using the method of equal appearing intervals, 37 participants were given 111 statements to sort based on the favorability of each statement. Median and interquartile ranges were used to construct the final Foster Child Attitude Scale.

Faculty Sponsor: Dr. John Pinto

2. 2:00-2:15 Occurrence of Fecal Coliform Bacteria in the Missouri River Waterway

Alex Permann & CJ Gradoville

Coliforms are indicators for a possible presence of pathogenic microorganisms. This study was designed to test a trend of low coliform levels to high coliform levels occurring as human population densities rise. Current research is ongoing as previous tests were inconclusive.

Faculty Sponsor: Dr. Rachel Robson

3. 2:15-2:30 Faculties Perceptions of HJF Learning Center and the Services it Provides

Matt Sitzmann, Alicia Runyan & Samantha Hood

The purpose of this research is to establish the current faculty perceptions of the HJF Learning Center, and how similar schools use their library facilities.

Faculty Sponsor: Dr. Pam Mickelson

4. 2:30-2:45 Going Green

Jeremy Lafrentz, Jonalee Jackes & Rebecca Bauer

Throughout the fall semester of 2008, a group in the marketing research class conducted an analysis of recycling on Morningside College's campus as well as other schools. We researched how to improve "Going Green" on our campus and how to get more students involved with recycling.

Faculty Sponsor: Dr. Pam Mickelson

Panel VII

1:45-2:45

Non-Empirical Research

SC 163

Latin America Today: The New Left and the Landscape: Nicaragua, Ecuador, and Venezuela

Phoebe Smith, Josh Johnson & Nichole Leyva

As the current administrations of these three countries attempt to steer their countries through challenges and opportunities of the 21st century, they wrestle with issues of land use, food policy, and the management of natural resources such as petroleum--at times through policies antagonistic to US preferences.

Faculty Sponsor: Dr. Gail Ament

Panel VIII

1:45-2:45

Non-Empirical Research

SC 165

Managing Through the Generations

Eric Hockenberry, Marissa Greco, Lindsay Nielsen, Heather Nielsen & Samantha Fritsch

The purpose was to discover similarities and differences among the four generations active in the workplace. The methodologies consisted of literature review and personal interviews of student work associates and multiple family members. The presentation will provide insights and ideas for success.

Faculty Sponsor: Dr. Pam Mickelson

Poster Session IVa

2:00-3:00

Empirical Research

SC Hallway

A. Hyperion Oil Refinery Project

Hogan Cemper, Joshua Towle, Erick DeLeon & Mario Melo

Hyperion Resources has proposed constructing one of the countries' largest oil refineries in Siouxland. We examined the potential impact of this project on the economy, environment and quality of life here in Siouxland. In addition, we report the results of a survey conducted to examine public opinion of this project.

Faculty Sponsor: Dr. Bill Heyborne

B. Detection of Coliforms in Fast-Food Restaurant Ice

Emily Peterson, Briana Dietrich & Eileen Sorenson

Water and ice can become contaminated by coliforms, bacteria commonly associated with human waste. Ice and water were collected from four different restaurants and tested for the presence of coliforms. While coliforms were detected at all restaurants, only one restaurant was over the EPA standard for coliforms in drinking water.

Faculty Sponsor: Dr. Rachel Robson

C. Analysis of Patch Size and Diversity for Small Mammals in Western Iowa

Valerie Crutchley, Brett Miner, Justin Flammang & Adam Mathers

The purpose of this study was to discern the effect of patch size on diversity and abundance of small mammals in the prairies in Mt. Talbot Preserve and Stone State park. Results indicate that larger prairie patches contain more species of small mammals and have a higher Simpson's diversity index.

Faculty Sponsor: Dr. Jim Stroh

D. The Affects of Agriculture on Levels of Nitrate in Siouxland Water

Brittany Williamson, Jamie Maguire & Jack Bush

Agricultural methods in Siouxland rely on nitrogen fertilizer. The run off from farms has the potential to contaminate local water systems. As part of this study, we compared amounts of nitrate found in local water and examined its effects. We found that nitrate amounts varied, and the methods for reducing nitrate levels exist.

Faculty Sponsor: Dr. Bill Heyborne

E. Behavioral Consequences Occurring as a Result of Lack of Attachment Bonds*Ashley Danner*

The purpose of this literature review is to determine what behavioral problems might occur due to failure to form strong attachment bonds during childhood. I hypothesized that an absence of attachment at a young age tends to lead to childhood behavioral problems. Though evidence tends to support this claim, further research is needed.

Faculty Sponsor: Dr. Larry Sensenig

F. The Psychological Effects of Children in Foster Care*Jodi Roling*

This paper will examine the long-term psychological effects suffered by children having multiple placements in our foster care system. This paper will review reasons for having multiple placements and some of the corresponding problems that occur.

Faculty Sponsor: Dr. Larry Sensenig

G. The Unique Challenges and Treatments A Child with Down Syndrome May Endure*Katherine Smith*

Children with Down Syndrome face diverse challenges in their lives that can be treated in multiple ways. These challenges include: language development, cognition, memory, and reading ability. In this literature review, I investigate these challenges and offer critique of previous research with suggestions for treatment and future research.

Faculty Sponsor: Dr. Susan Burns

Graduate School: The Ins, the Outs, the Low-Down

Jeremy Bauer, Sabrina Higgins, Tareyn Moss, Christina Thomsen, Justin Moser, Bryan Hansen, Emily Peterman, & Chiao Ying Chang

This panel discussion consists of students who have had direct experience with applying to graduate school in various disciplines. Students will answer questions about how they decided upon graduate school, what they did to prepare, the application process, and deciding the next step.

Faculty Sponsor: Dr. Susan Burns

Oral Session VIII**1. 3:00-3:15 Athletic Virtue From Religion to Role Model***Maegan Simpson*

Using scholarly sources I'll show that virtue is as important for athletes today as it was in the ancient world. Then it was important for religious reasons now we need virtuous athletes to be good role models for youth.

Faculty Sponsor: Dr. Heather Reid

2. 3:15-3:30 Virtue and Leadership in Ancient and Modern Sports*Eric Damon*

Using the ethical theory of Aristotle combined with historical evidence from ancient and modern sports; I will show that the connection between discipline, leadership, and social development is common to ancient and modern sports.

Faculty Sponsor: Dr. Heather Reid

3. 3:30-3:45 The Connection Between Ancient Athletics & Democracy*Cody Dennis*

This project will examine the relationship between the ideals and practice of ancient sports as they apply to democracy. Published ancient and modern works will be used as means of research. The evidence suggests that early Greek athletic ideals and practices may have inspired the development of democracy.

Faculty Sponsor: Dr. Heather Reid

4. 3:45-4:00 The virtues promoted by Ancient Greek philosophers

Seth Atkins

The virtues promoted by Ancient Greek philosophers: courage, humility, self discipline, wisdom, self control, and justice, are just as vital to athletes today as they were in ancient times.

Faculty Sponsor: Dr. Heather Reid

Panel X 3:00-4:00
Non-Empirical Research SC 163

Latin America Today: Benefits and Blind Spots of Globalization: Mexico, Costa Rica, and Panama

Michelle Greenlee, Dana Streff & Eva Mattox

While globalization formalized through neo-liberal trade agreements such as NAFTA and CAFTA heightens prosperity for some sectors of the population, critics say others are excluded and made invisible. In the meantime, Panama rushes to refurbish its canal facilities to better accommodate global commerce.

Faculty Sponsor: Dr. Gail Ament

Poster Session Va 3:15-4:15
Empirical Research SC Hallway

A. The Effects of Gender and Age on Creativity

Maureen Weinmeister, Hollie Vaughan & Kali Angerman

Forty-two Morningside College students were divided into upperclassmen and underclassmen in order to test levels of creativity. Experimenters believed underclassmen are more creative than upperclassmen and males are more creative than females. Results indicate underclassmen were more original than upperclassmen in the pictures drawn. No significance was found between genders.

Faculty Sponsor: Dr. Larry Sensenig

B. Effects of Divorce on Adult Children's Perceptions of Marriage

Kelly Pudenz

A study was conducted to examine effects of parental divorce on adult children's perceptions about marriage. Forty-three participants completed surveys assessing attitudes toward marriage and personal relationships. Results indicate participants whose parents are still married had a more favorable outlook on marriage than participants whose parents have divorced.

Faculty Sponsor: Dr. Susan Burns

C. Gender Differences in the Judgment of a Victim Story

Kayo Nakaguchi

This study investigated how males and females judge characters and action in a victim story. A questionnaire containing 11 different questions was used. Results found females and males had different judgments about characters in the story and demonstrated that female participants felt more strongly that the female character was in danger.

Faculty Sponsor: Dr. Kim Christopherson

D. The Dating Doctor – Differences between Genders Willingness to Sacrifice and Disclosure Rates

Samantha Fritsch

Gender Differences were measured in a study examining willingness to sacrifice and willingness to disclose information to significant others. Participants completed a two-part survey, including the BEM survey and a measurement of disclosure and sacrifice. Subjects included 50 males and 52 females. Results will be discussed.

Faculty Sponsor: Dr. Kim Christopherson

Poster Session Vb 3:15-4:15
Empirical Research SC Hallway

E. Coloration Variability in Dwarf and Common Octopi

Jamie Maguire, Kelsey Prosser & Alesha Arnold

Most octopi are able to change their color as a defensive mechanism. Our goal was to test the range of this ability of two octopus species, a dwarf octopus and a common octopus. By changing environment color, we found that these species can rapidly change through a diverse color array.

Faculty Sponsor: Dr. Bill Heyborne

F. Invasive Species in the Siouxland Area

Danny Goodding, Samantha Emerick & Maggie Rooney

Invasive species are a problem around the globe. They have been introduced by numerous means; some accidental and others intentional. We initiated an investigation into the invasive species which affect the Siouxland area. We also examined what's being done locally to control these species.

Faculty Sponsor: Dr. Bill Heyborne

G. Effects of Light, Feeding, and Temperature on Planaria, *Dugesia tigrina*, Regeneration Rates

Valerie Crutchley, Bailey Johnson, Cara DeStigter & Vanessa Warzecha
Regeneration rate of planaria (*Dugesia tigrina*) were observed in various environments after being halved. Altered conditions included: temperature (warm, cold, and room), feeding (regular and starving), and light (perpetual, natural, and no light). The study observed that *Dugesia tigrina* regenerates best under natural light, regular feeding, and room temperature conditions.
Faculty Sponsor: Dr. Bill Heyborne

H. Recolonization of a Prairie by Small Mammals after a Spring Burn

Thomas Butzke, Patrick Dempsey, Brett Miner & Justin Flammang
The purpose of this study was to document the effect of fire on the abundance of mammals in the largest prairie patch in Mt. Talbot Preserve. No mammals were captured for the first two months. Density and diversity increased through 2008 and reached a peak in Dec. (439 mammals/ha).
Faculty Sponsor: Dr. Jim Stroh

Panel XI **4:05-4:35**
Non-Empirical Research **SC 162**

Latin America Today: Pushed and Pulled into the New Millennium: Peru and Argentina
Jennifer Thomas & Anne Torkelson
An Andean nation, Peru faces increasing urbanization, criminalization of the coca leaf, and resurgence of the violent Shining Path. By contrast, Argentina's populist regime deals with difficult social realities following the Dirty War and financial meltdown.
Faculty Sponsor: Dr. Gail Ament

Panel XII **4:05-4:35**
Non-Empirical Research **SC 165**

Jane Austen: Controversial Issues in Her Life and Fiction
Brandie Koenig & Kris Sturm
The first study examines how Jane Austen's possible lesbian and homoerotic tendencies impacted the relationships portrayed among female characters in her novels. The second study investigates Jane Austen's biography and letters to show aspects of her own life used in her novels.
Faculty Sponsor: Dr. Marty Knepper

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