8th Annual Student Research & Creative Works Symposium

Wednesday, May 18, 2005  •  8:00 a.m. - 5:30 p.m.  •  Monroe Hall

Agenda

8:00 - 9:00 a.m. Coffee Hour: 1st Floor
Conversation, coffee, juice, & pastries

8:00 - 4:00 p.m. Art Exhibit: 2nd Floor Women’s Studies Lounge
Session with Artists from 1:20 p.m. – 2:15 p.m.

8:40 - 11:40 a.m. Oral Presentations: 1st Floor Rooms 102, 107, 109, & 114

9:00 - 11:20 a.m. Creative Writing Panel: 2nd Floor Main Lounge

10:00 – 12:00 a.m. Funding Your Graduate School Education
Room 302 Hallway: Dr. Jeanne Small, National Science Foundation

12:00 - 1:00 p.m. Keynote Address: 2nd Floor Main Lounge
Lunch Provided

Dr. Jeni McNeal, Physical Education Health & Recreation
“Flipping for Science! How a Passion for Sport Led to a Life in Science”

1:20 - 2:15 p.m. Session with Artists: Women’s Studies Lounge

1:40 - 4:00 p.m. Oral Presentations: 1st Floor Rooms 102, 107, 109, & 114

1:40 - 3:40 p.m. Music & Film: 2nd Floor Main Lounge

2:00 – 4:00 p.m. Funding Your Graduate School Education
Room 302 Hallway: Dr. Jeanne Small, National Science Foundation

2:00 - 4:00 p.m. Poster Session: 3rd Floor Room 302
Posters can be viewed throughout the day

4:00 - 5:30 p.m. Reception & Closing Ceremony: 2nd Floor Main Lounge
Refreshments

Please join us for the closing ceremony to recognize and celebrate the presenters and their faculty mentors. We will present awards in recognition of excellence for outstanding presentations.
Symposium Sponsors
EWU Office of the Provost ◊ Graduate & Undergraduate Studies
Grants & Research Development ◊ Board of Trustees Diversity Initiative
McNair Scholars Program ◊ TIAA-CREF

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Ruth & Jerry Galm ◊ Grant Forsyth

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Dean Ronald Dalla  Kerry Moxcey
Dr. Jeni McNeal

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Trish McFarland

And to All Students, Judges, Mentors, Volunteers & Departments
who worked to make the Symposium a success

Symposium Committee Members
Mark Baldwin, Assistant Dean for Undergraduate Studies
Larry Briggs, Associate Dean for Graduate Studies
Cynthia Dukich, McNair Scholars Counselor/Academic Coordinator
Grant Forsyth, Assistant Professor of Economics
Meryl Gersh, Professor of Physical Therapy
Angela Johnson, Research Symposium Assistant
Karen McKinney, Director of Research Symposium & McNair Scholars
Yves Nievergelt, Professor of Mathematics
Jeanne Small, Professor of Chemistry & Biochemistry
Jenelle Walker, Graduate Assistant Research Symposium

*If you would like to contribute, envelopes are available in the Symposium office, Monroe 107. Please make checks payable to:

EWU Foundation, for Student Research Symposium
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Flipping For Science! How a Passion for Sport Led to a Life in Science

Have you ever found yourself so excited and engaged by something that the rest of the world just seemed to disappear? What about your life makes you feel energized and invigorated? In the sporting world we call this being “in the zone”. Imagine feeling that every day in the work you do. This feeling is created from knowing your passion for what it is that drives you forward in your life. Drawing from her experience first as an athlete, then as a coach, graduate student, and finally as a young investigator, Dr. McNeal will explore the process of creating a fulfilling career out of passion.

Biography:
Dr. Jeni McNeal obtained her B.S. in physical education from EWU in 1993, and completed her M.S. and Ph.D. from the University of Utah (exercise physiology, minor statistics and research methods). Dr. McNeal serves as the vice-chair of research for the U.S. Elite Coaches Association for Women’s Gymnastics and is a member of the Performance Enhancement Team for the U.S. Diving National Training Center. Her research focuses on performance aspects of acrobatic sports including such aspects as stretching, strength and power, growth and anthropometry, and biomechanics. She has published over 35 articles in peer-reviewed journals and conference proceedings on these topics. Her research involves regular collaboration with the U.S. Olympic Training Center where current projects include the use of vibration in flexibility enhancement, dehydration in prolonged gymnastics training and the mechanics of athlete-equipment interactions in gymnastics. All five of her athletes represented the U.S. Diving Team at the Olympic Games in Athens last summer.

Funding Your Graduate School Education

Dr. Jeanne R. Small
National Science Foundation, Division of Undergraduate Education
On leave from EWU Chemistry and Biochemistry Department

10:00 – 12:00 a.m. & 2:00 – 4:00 p.m.
Third Floor Hallway outside Room 302

Students in the fields of life sciences, chemistry, computer and information science, engineering, social science, physics and astronomy, mathematics, geosciences and psychology have opportunities to apply for fellowships to support their graduate education through the National Science Foundation (NSF) and other agencies such as the National Institutes of Health (NIH) and the Howard Hughes Medical Institute (HHMI). The pathways to financial support are both direct (applying for a fellowship yourself) and indirect (entering graduate programs that have funding already in place to support graduate students). Dr. Small will have the information to help you explore the available pathways toward graduate student financial support.
## Art Exhibit

### All Day: Women’s Studies Lounge 2nd Floor (See abstracts pg. 13)

Session with Artists: Women’s Studies Lounge 1:20 – 2:15 p.m.

<table>
<thead>
<tr>
<th>Artist</th>
<th>Type of Work</th>
<th>Titles</th>
<th>Mentor</th>
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<tbody>
<tr>
<td>Laurie, Linda</td>
<td>Sculptures</td>
<td>“What You Don’t See,” “Who Do You Really See”</td>
<td>Nathan Orosco, Art</td>
</tr>
<tr>
<td>Hall, Cliff</td>
<td>Sculptures</td>
<td>“Impelled,” “Spider Crab”</td>
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<tr>
<td>Abbott, Victoria</td>
<td>Hanging Sculptures</td>
<td>“Border Bride,” “Arm Me Exsanghine,” “Ultra Violet”</td>
<td></td>
</tr>
<tr>
<td>Goldberg, Rebecca</td>
<td>Watercolor</td>
<td>“Survivor Series,” “Garden Watercolor,” “Painted Quilt,” “Turns with Dead Ends”</td>
<td></td>
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<tr>
<td>Regal, Sylvia</td>
<td>Glazed Terra-Cotta</td>
<td>“Decapitative Moments”</td>
<td></td>
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<tr>
<td>Arnold, Genevieve</td>
<td>Watercolor &amp; Marker</td>
<td>“Phylogeny,” “Hibernating Horseshoe Bat I,” “Before I Was a Bat,” “Hibernating Horseshoe Bat II,” “Architects”</td>
<td></td>
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<tr>
<td>Brown, Gabriel</td>
<td>Acrylic &amp; Charcoal</td>
<td>Untitled</td>
<td></td>
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<tr>
<td></td>
<td>Fabric Paint, Gloss</td>
<td>Vanish, Tempura, Model Car Paints</td>
<td></td>
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<tr>
<td>Power, Stephanie</td>
<td>Plaster Sculpture</td>
<td>Untitled</td>
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</table>

## Creative Writing Panel: 9-11:20 a.m.

### 2nd Floor Main Lounge (See abstracts pg. 17)

<table>
<thead>
<tr>
<th>Authors</th>
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<tbody>
<tr>
<td>Lee, Erica</td>
<td>Museum Montage</td>
<td>Jonathan Johnson, Creative Writing</td>
</tr>
<tr>
<td>Huddleston, Judy</td>
<td>Memoir in Literary Nonfiction</td>
<td></td>
</tr>
<tr>
<td>Lee, Joal</td>
<td>Obstructing Eden</td>
<td>Natalie Kusz, Creative Writing</td>
</tr>
<tr>
<td>Weidert, Aaron</td>
<td>At The Movies</td>
<td></td>
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<tr>
<td>Betz, Phillip</td>
<td>The Power of Addiction</td>
<td>Jonathan Johnson, Creative Writing</td>
</tr>
<tr>
<td>Dodd, Jeffrey</td>
<td>Panel Reading From EWU Student Poets</td>
<td></td>
</tr>
<tr>
<td>Belden, Jared</td>
<td>&quot;</td>
<td></td>
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<tr>
<td>Hudgens, Sarah</td>
<td>&quot;</td>
<td></td>
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<tr>
<td>Van Winkel, Tania</td>
<td>&quot;</td>
<td></td>
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<tr>
<td>Ross, Rachel</td>
<td>&quot;</td>
<td></td>
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<tr>
<td>Rodriguez, Adam O’Connor</td>
<td>Panel Reading from EWU Student Fiction Writers</td>
<td>Creative Writing Faculty</td>
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## Morning Session Room 102: (See abstracts pg. 21)

<table>
<thead>
<tr>
<th>Time</th>
<th>Authors</th>
<th>Titles</th>
<th>Mentors</th>
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</thead>
<tbody>
<tr>
<td>8:40</td>
<td>Taylor, Jennifer</td>
<td>Alarm Calls in Ground Squirrels: Caller Recognition?</td>
<td>Margaret, O'Connell, Biology</td>
</tr>
<tr>
<td>9:00</td>
<td>Matheson, Russell; Teufert, Bobbi</td>
<td>The Effect of Xylitol on Streptococcus Mutans associated with Dental Caries</td>
<td>Sidney Kasuga, Biology</td>
</tr>
<tr>
<td>9:20</td>
<td>Stragis, Licia</td>
<td>Mobbing as an Avian Monitoring Mechanism</td>
<td>Margaret O’Connell, Biology</td>
</tr>
<tr>
<td>9:40</td>
<td>Kenney, Raymond; Moore, Zach</td>
<td>Water Quality Analysis of Latah Creek</td>
<td>Jeff Corkill, Chemistry &amp; Biochemistry</td>
</tr>
<tr>
<td>10:00</td>
<td>Fuller, Heather</td>
<td>Landowner Attitudes towards Elk on Wildlife Refuge: Private Property Interface</td>
<td>Margaret O’Connell, Biology</td>
</tr>
<tr>
<td>10:20</td>
<td>Conner, Marriane</td>
<td>Synthesis and Characterization of CuF$_2$(H$_2$O)$_2$(pyz), [pyz = pyrazine], A Quasi-2D Antiferromagnet</td>
<td>Jamie Manson, Chemistry &amp; Biochemistry</td>
</tr>
<tr>
<td>10:40</td>
<td>Howard, Melinda</td>
<td>Positive Interactions of Two Invasive Species in Aquatic Ecosystems</td>
<td>Margaret O’Connell, Biology</td>
</tr>
<tr>
<td>11:00</td>
<td>Rader, Derek</td>
<td>Food Habits of Lake Trout (Salvelinus mamy cus h), Burbot (Lota lota), Northern Pikeminnow (Ptychochelius organensis) and Kokanee (Oncorhychus nerka) in Bead Lake, Pend Oreile County, Washington.</td>
<td>Allan Scholz, Biology</td>
</tr>
</tbody>
</table>

## Morning Session: Room 107 (See abstracts pg. 27)

<table>
<thead>
<tr>
<th>Time</th>
<th>Authors</th>
<th>Titles</th>
<th>Mentors</th>
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</thead>
<tbody>
<tr>
<td>8:40</td>
<td>Lent, Suzanne</td>
<td>Institutional Fit: Diverse Student Experiences and the Shaping of Academic Identity</td>
<td>Todd Hechtman, Sociology</td>
</tr>
<tr>
<td>9:00</td>
<td>Wollman, Christina</td>
<td>The Economic, Social, and Health Effects of a Public Smoking Ban</td>
<td>Charles Dotson, Urban &amp; Regional Planning</td>
</tr>
<tr>
<td>10:00</td>
<td>Miller, Michael</td>
<td>Rehabilitation of a Patient with a Pectoralis Major Tendon Transfer to Replace an Irreparable Subscapularis: A Case Study</td>
<td>Darl Vander Linden, Physical Therapy</td>
</tr>
<tr>
<td>10:40</td>
<td>Bertagni, Jennifer</td>
<td>Wound Management for a Person with Rheumatoid Arthritis</td>
<td>Meryl Gersh, Physical Therapy</td>
</tr>
<tr>
<td>11:00</td>
<td>Greene, Travis</td>
<td>Rehabilitation of Total Knee Arthroplasty in an Outpatient Physical Therapy Setting: A Case Study</td>
<td>Meryl Gersh, Physical Therapy</td>
</tr>
</tbody>
</table>
### Morning Session: Room 109 (See abstracts pg. 33)

<table>
<thead>
<tr>
<th>Time</th>
<th>Authors</th>
<th>Titles</th>
<th>Mentors</th>
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</thead>
<tbody>
<tr>
<td>8:40</td>
<td>Sanchez, Jesse</td>
<td>Stereotypes of Spanish Gypsies in Literature from the Golden Age of Spain <em>(Presented in Spanish)</em></td>
<td>José Maria García-Sánchez &amp; Dr. Guillermina Walas-Mateo, Modern Languages &amp; Literatures</td>
</tr>
<tr>
<td>9:00</td>
<td>Cavagnaro, Toni</td>
<td>Quetzalcoatl Man or God? <em>(Presented in Spanish)</em></td>
<td>&quot;</td>
</tr>
<tr>
<td>9:20</td>
<td>Gamble, Allison</td>
<td>The Influence of Positivism in the works of Vicente Riva-Palacio <em>(Presented in Spanish)</em></td>
<td>&quot;</td>
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<tr>
<td>9:40</td>
<td>Marr, Julie</td>
<td>John Keats and The Eve of St. Agnes: A Study in Contrasts</td>
<td>Christina Valeo, English</td>
</tr>
<tr>
<td>10:00</td>
<td>Johnson, Benjamin</td>
<td>Stuck in the Middle with Dreiser: The Realists and Naturalists Navigate between Reason and Instinct</td>
<td>Judy Logan, English</td>
</tr>
<tr>
<td>10:20</td>
<td>Huffstutter, Joanne</td>
<td>The House of Mirth: Exposing Edith Wharton’s Naturalist Tendencies</td>
<td>Judy Logan, English</td>
</tr>
<tr>
<td>10:40</td>
<td>Williams, Jenna</td>
<td>Jim Crow: Dancing for Cain</td>
<td>Dana Elder, English</td>
</tr>
</tbody>
</table>

### Morning Session: Room 114 (See abstracts pg. 37)

<table>
<thead>
<tr>
<th>Time</th>
<th>Authors</th>
<th>Titles</th>
<th>Mentors</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:40</td>
<td>Riley, Sara; Gregory, Catherine; Ruge, Laura</td>
<td>Extramarital Affairs as a Predictor of Marital Satisfaction</td>
<td>Kayleen Islam-Zwart, Psychology</td>
</tr>
<tr>
<td>9:00</td>
<td>Meyers, Chris Petersen, Tamara</td>
<td>“I Don’t Mean to Sound Arrogant But…” The Effects of Disclaimers on Person Perception</td>
<td>Amani El-Alayli, Psychology</td>
</tr>
<tr>
<td>9:20</td>
<td>Petersen, Tamara Myers, Chris</td>
<td>Exploring the Factors that Influence the Effects of Disclaimers on Person Perception</td>
<td>&quot;</td>
</tr>
<tr>
<td>9:40</td>
<td>Lystad, Amy; Whitehall, Ann; Adams, Sara</td>
<td>The Relationship between Human and Pet Attachment and Life Satisfaction</td>
<td>&quot;</td>
</tr>
<tr>
<td>10:00</td>
<td>Stenehjem, Kjersti</td>
<td>Gender Differences in Motivation of Sports Tasks</td>
<td>&quot;</td>
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<tr>
<td>10:20</td>
<td>Contreras, Crystal</td>
<td>Characteristics and Treatment of Female Sexual Perpetrators: A Literature Review of the Present Research</td>
<td>Kayleen Islam-Zwart, Psychology</td>
</tr>
<tr>
<td>10:40</td>
<td>Cawston, Alvina; Redding, Nick</td>
<td>Acculturation &amp; Cultural Adaptation Pain in Native American College Students and Alumni</td>
<td>Gail Hick, Psychology, Jaqueline Geddes, Counseling &amp; Psychological Services, Theresa Martin, Office of Institutional Research Demography &amp; Assessment</td>
</tr>
<tr>
<td>11:00</td>
<td>Shockley, Holly</td>
<td>Diactlelitical Behavior Therapy and Motivation to Change</td>
<td>Armin Arndt, Counseling, Educational, &amp; Developmental Psychology</td>
</tr>
<tr>
<td>11:20</td>
<td>Panamaroff, Jon</td>
<td>Empathy and Sex Roles: MPA vs. MBA Students</td>
<td>Lawrence Luton, Public Administration</td>
</tr>
</tbody>
</table>
# Afternoon Session: Music & Film

**2nd Floor Main Lounge 1:40-3:30 p.m. (See abstracts pg. 43)**

<table>
<thead>
<tr>
<th>Time</th>
<th>Author</th>
<th>Title</th>
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<tbody>
<tr>
<td>1:40</td>
<td>Green, Charles</td>
<td>Addressing the Events of September 11th 2001 through a Multi-stylistic Composition</td>
<td>Jonathan Middleton, Music</td>
</tr>
<tr>
<td>2:00</td>
<td>Pendleton, Christina Jill</td>
<td>Composing Music as Imagery</td>
<td>&quot;</td>
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<tr>
<td>2:20</td>
<td>McCormick, Heidi</td>
<td>Shades of Hope: A Musical Interplay of Bassoon and Marimba</td>
<td>&quot;</td>
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<tr>
<td>2:40</td>
<td>Czoski, Josh</td>
<td>Student Composition: “Romance” for Violin with Piano Accompaniment</td>
<td>Philip Baldwin, Music</td>
</tr>
<tr>
<td>3:00</td>
<td>See, Matt</td>
<td>Ups &amp; Downs</td>
<td>Tom Mullin, Electronic Media &amp; Film</td>
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# Afternoon Session: Room 102 (See abstracts pg. 47)

<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>1:40</td>
<td>Willis, John; Snover, Keirsten; Litzkow, Jamie; Fowler, Jon; Pearce, Amber</td>
<td>Africa in the 21st Century: Changing Voice of Culture in Globalization</td>
<td>Jerry Galm, Anthropology</td>
</tr>
<tr>
<td>2:00</td>
<td>Snover, Keirsten</td>
<td>Malaria in Africa: Is America Part of the Solution or Part of the Problem?</td>
<td>Jerry Galm, Anthropology</td>
</tr>
<tr>
<td>2:20</td>
<td>Goertz, Susan</td>
<td>Haunted by Gringolandia: Frida Kahlo as Cultural Icon</td>
<td>Julia Smith, Anthropology</td>
</tr>
<tr>
<td>2:40</td>
<td>Harshman, Shauna</td>
<td>Whose Social Capital is it? Deconstructing the Agendas Hidden in the Language of Social Capital</td>
<td>Stacey Warren, Geography, Julia Smith, Anthropology</td>
</tr>
<tr>
<td>3:00</td>
<td>Baldwin, Richard</td>
<td>How to Fund Exploration of other Star Systems and Staving off the Collapse of Western Civilization</td>
<td>Stacey Warren, Geography</td>
</tr>
<tr>
<td>3:20</td>
<td>Moses, Amelia</td>
<td>The Real People: Indigenous Language Loss and Revitalization Among the Nimi'I Puu</td>
<td>Jerry Galm, Anthropology</td>
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### Afternoon Session: Room 107 (See abstracts pg. 51)

<table>
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<th>Time</th>
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<tbody>
<tr>
<td>1:20</td>
<td>Vert, Amanda</td>
<td>Rhetorical Institution, Relevant Institution</td>
<td>Patricia Chantrill, Communication Studies</td>
</tr>
<tr>
<td>1:40</td>
<td>Terrell, Thomas</td>
<td>Apartheid Past and Present: Israel’s Wall, South Africa, and the Role of International Policies</td>
<td>Kristin Edquist, Government</td>
</tr>
<tr>
<td>2:00</td>
<td>Richards, Kimberly</td>
<td>The Correlation between Native American Media-Induced Images and the High Rate of Hate Crimes and suicide in Native Communities</td>
<td>Deidre Almeida, American Indian Studies</td>
</tr>
<tr>
<td>2:20</td>
<td>Russ, Nicholas</td>
<td>Leaders of the Struggle: Commonalities between Dr. Martin Luther King and Tupac Shakur</td>
<td>Sean Chabot, Sociology</td>
</tr>
<tr>
<td>3:00</td>
<td>Manning, Ami</td>
<td>A House Divided Cannot Stand: The Abortion Dispute and the American Federalist System</td>
<td>Dr. Jeremy Bailey &amp; Dr. Kristin Edquist, Government</td>
</tr>
<tr>
<td>3:20</td>
<td>Smith, Alvin</td>
<td>Don't Ask, Don't Tell, Don't Harass, Don't Pursue: An Analysis of How the Military’s Policy on Sexual Orientation Relates to Public, Military, and Human Rights</td>
<td>Jennifer Stucker, Social Work</td>
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</table>

### Afternoon Session: Room 109 (See abstracts pg. 55)

<table>
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<tbody>
<tr>
<td>1:20</td>
<td>Peasley, Anne</td>
<td>Translating Differences: Discrepancies in The Iliad</td>
<td>Jonathan Johnson, Creative Writing</td>
</tr>
<tr>
<td>1:40</td>
<td>Hinnenkamp, Denise</td>
<td>Ovid, Heloise and Eleanor of Aquitaine: A Medieval Feminist Triad</td>
<td>Barbara Miller, Art</td>
</tr>
<tr>
<td>2:00</td>
<td>Nelson, Alice</td>
<td>Lucy on the Dock</td>
<td>Polly Buckingham, English</td>
</tr>
<tr>
<td>2:20</td>
<td>Sims, Katherine</td>
<td>As They Might Be</td>
<td>Judy Logan, English</td>
</tr>
<tr>
<td>2:40</td>
<td>Williams, Ruth</td>
<td>Recovering Mina: Reexamining the Poetry of Modernist Mina Loy</td>
<td>Christopher Howell, Creative Writing</td>
</tr>
<tr>
<td>3:00</td>
<td>Wagoner, Sharon</td>
<td>Art Letters: The Friendship of the Artist Albrecht Durer and the Scholar Willibald Pirckheimer</td>
<td>Barbara Miller, Art</td>
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### Afternoon Session: Room 114 (See abstracts pg. 59)

<table>
<thead>
<tr>
<th>Time</th>
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</thead>
<tbody>
<tr>
<td>1:20</td>
<td>Ladish, Kerri</td>
<td>Swimming through Melville's Religious Thought: A Study of His Views as Present in <em>Redburn, Moby Dick, The Encantadas,</em> and <em>Billy Budd</em></td>
<td>Judy Logan, English</td>
</tr>
<tr>
<td>1:40</td>
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<td>Anthony Flinn, English</td>
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<td>2:00</td>
<td>Djulovic, Amira</td>
<td>A Study of Jane Austen's Heroines: Male Counterparts as an Essential Element of a Traditional Romantic Novel</td>
<td>Christina Valeo, English</td>
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<td>2:20</td>
<td>Cheney, W. Scott</td>
<td>Transformation and Existence in Seamus Heaney's Poetry</td>
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<td>2:40</td>
<td>Huston, Jeremy</td>
<td>Dues Ex Monstrum: Herman Melville's Captain Ahab and His Similaritiees to Monsters of Classical Mythology</td>
<td>Judy Logan, English</td>
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<td>Sterner, Michael</td>
<td>Ahab's Metaphysics in Melville's Moby Dick</td>
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<td>Updegrove, Taylor</td>
<td>Creating a Genomic Library of <em>Serratia Proteamaculans</em> DNA in Order to Isolate a Zinc Resistance Gene</td>
<td>Donald Lightfoot, Biology</td>
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<td>Moan, Chris</td>
<td>A Survey of the Aquatic Community in Clear Lake, Spokane County, Washington.</td>
<td>Allan Scholz, Biology</td>
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<td>Lewandowsky, Heather; Marsh, Elle; Muirhead, Sunny</td>
<td>The Role of Gender in Sexual Desire among Depressed Individuals</td>
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<td>Rideout, Tiffany; Gilbreth, Natalee; Reid, Nick</td>
<td>Recognizing Alcoholism Through Lack of Education</td>
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<td>Fear Reactions in Male and Female College Students as a Result of Sexual Abuse History</td>
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<td>McEnvoy, Meghann; Ransom, Ryan; Rawlins, Karen; Whelpley, Lynn</td>
<td>Alcohol Dependence and High Risk Behavior</td>
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<td>Russell Kolts &amp; Phillip Watkins, Psychology</td>
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<td>Conservative Intervention for Shoulder Impingement with Secondary Partial Rotator Cuff Tear</td>
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<td>Rehabilitation following an Evans Calcaneal Osteotomy</td>
<td>Meryl Gersh, Tanya LaPier, Darl Vander Linden, Physical Therapy</td>
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<td>Richard Orndorff &amp; P. Ted Doughty, Geology</td>
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<td>A Guide of Health Services for Foreign Students at Eastern Washington University</td>
<td>Julia Smith, Anthropology</td>
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<td>Digital Systems Design: A RISC Design Project</td>
<td>Kosuke, Imamura, Computer Science</td>
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<td>Dr. Fran Sherwood, Children's Studies</td>
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Art Exhibit 8-4
Second Floor
Women’s Studies Lounge
Session with Artists 1:20-2:15
What You Don’t See: Steel, cast iron, glass, and hardware cloth; Who Do You Really See: Steel, glass, bolts, and hardware cloth

Linda Laurie, Undergraduate
Nathan Orosco, Art

I am greatly inspired by architecture and structures. Most of the work takes on some sort of geometric form. I deliberately choose materials that lend themselves to perfection, like clear glass feminine domestic dinner plates, which are shattered and precisely woven into wire mesh then placed in front of a mirror to be viewed through and into. My current work addresses social issues, especially domestic violence in all its versions.

Impelled: Sculpture; Spider Crab: Sculpture

Cliff Hall, Undergraduate
Nathan Orosco, Art

My work encompasses the use of found objects and how I can manipulate their material substance. Creating these works sparks conversation between the viewer and the materials used. They are in fact nothing more than assembled elements that have a different meaning or feeling to each person who sees what he/she perceives in their own interpretation.

Border Bride: Fabric, wax, and metal; Arm Me
Exsanghine: Fabric, wax, and metal; Ultra Violet: Found screen and thread

Victoria Abbott, Undergraduate
Nathan Orosco, Art

Survivor Scenes: Watercolor; Garden Watercolor: Watercolor; Painted Quilt: Acrylic; Turns with Dead Ends: Welded steel

Rebecca Goldberg, Undergraduate
Nathan Orosco, Art

I have a desire as an artist to present my audience with a series of works and let the audience discern for themselves what is inside the images. I feel I can convey moods in my pieces by using a variety of media including acrylic paints, fabrics, and metals. My work is an exploration of the worlds outside of human sight and how combinations of media can invoke the viewer’s feelings. My pieces range from sculpture to collage and paintings. My artistic influences include Joan Miro, Rene Magritte, and David Smith.

Decapitative Moments: Glazed terra cotta

Sylvia L. Regal, Undergraduate
Nathan Orosco, Art
**Phylogeny:** Watercolor and marker; *Hibernating Horseshoe Bat I:* Watercolor and marker; *Before I Was a Bat:* Watercolor and marker; *Hibernating Horseshoe Bat II:* Watercolor, marker, and charcoal; *Architects:* Watercolor and marker

**Genevieve Arnold, Undergraduate**

*Nathan Orosco, Art*

Three Acrylic Works on Paper, untitled; Three Charcoal Drawings, untitled

**Gabriel Brown**

*Nathan Orosco, Art*

Working from a live model, for me, is the best way to enjoy art in the moment. There is a sense of urgency as you work (because the session, in these drawings, is only about 1 hour) that requires you to keep moving, not worrying about how things look. You can reach a purely intuitive state where you will discover things that you didn't know were possible.

Red Barney with Screwed-in Eye; Creamy Barney with Sea Green Sun; Blue Barney with Round Red Socket; Jesslyne; Queen of Scientific Articles

**Jennifer Grimes**

*Nathan Orosco, Art*

These sculptures are not about facts. They are about components to the self (as in perceived disfigurements); things that cannot be hidden (like the very indiscreet result of overfilling brain synapses); and what I might like to "correct" of others or of myself (like replacing adornment with moles or warts). They are about a freedom that I might have had if I had created my own body. They are about masks and ambiguity and finding charm in the grotesque. They are about lumps and bumps that can be redirected and contained, and they are about things that I would like to touch. You may certainly place your thumb in the spout of Jesslyne's neck, if you like.
Creative Writing Panel
Second Floor Main Lounge
9-11:20

Poetry
Nonfiction
Fiction
Creative NonFiction Panel: The Art of Truth-Telling
Facilitator: Erica D. Lee, Graduate

While much nonfiction is being published in America today, not all is considered literary. Popular nonfiction is often based on interesting events in the lives of well-known figures. It is therefore plot-based and answers the question “What happened?” In contrast, creative nonfiction seeks not only to tell what happened, but why such events are significant.

Using techniques found in poetry and fiction (such as lyricism, tension and resolution, characterization, and scene-setting), creative nonfiction writers weave meaning from the real events of their lives. Rather than being driven by the drama, humor, or pathos of events, artful nonfiction is driven by the author's choice of technique and revelation of understanding. The beauty of this art form rests in the author’s ability to tell the truth about herself and her world in such a way that readers recognize their own humanity in the text.

Creative nonfiction includes the well-known sub-genres of memoir and personal essay, as well as the meditative essay, travel essay, and character sketch. Famous writers of this genre include Philip Lopate, John McPhee, and Annie Dillard, among many others.

Museum Montage (Personal Essay)
Erica D. Lee, Graduate
Dr. Jonathan Johnson, Creative Writing

As a graduate student pursuing a degree in creative nonfiction, I am always sorting through my memories and experiences, trying to find points of tension or misunderstanding that I might resolve on the page. Several weeks ago, I remembered a strange incident from my childhood: with my sixth-grade science class, I had gone to the Museum of Natural History in Denver to see an exhibit of real human fetuses preserved in plastic blocks. The academic purpose of the exhibit was to show the stages of gestation a body goes through to become recognizable as human.

In my mind, the memory was so eerie and so lovely, that I wanted to explore its meaning on a deeper level. I wondered: What does it mean when we bring what is hidden in the womb into the light? How do we understand and define what makes us human? Like all memories, the image of the preserved bodies was connected to many others. The essay gave me a way to pull all of these memories together, so that I might answer my questions and explore my feelings about this unusual day from my childhood.

Memoir in Literary Nonfiction
Judy Huddleston, Graduate
Dr. Jonathan Johnson, Creative Writing

As part of the MFA Nonfiction panel, I'll be reading a selection from “Red Lipstick,” a memoir in progress about a thirteen-year-old girl coming to grips with sexuality and how deeply girls are affected by family, patriarchal society and religion at puberty. This particular chapter “Good Girls/Bad Girls” focuses on different girl’s stories on that “virgin-whore” continuum by using dialogue and scene techniques common to fiction.

The larger story is about adolescent girls' transformation from a having a “real” self into a socially defined female-self who cares about make-up, clothes, and bodily attractiveness for the sake of boys and being popular. For better or worse, that self can
morph into the women they become and often has no model for independence or spirituality but those set by men.

**Obstructing Eden**  
*Joal D. Lee, Graduate*  
*Natalie Kusz, Creative Writing*

Profundity and humor often reside in the mundane, if one looks closely enough. This essay took me on a journey discovering the latent, almost paradisiacal, value of chewed-off fingernail slivers.

**At the Movies**  
*Aaron J. Weidert, Undergraduate*  
*Natalie Kusz, Creative Writing*

Everyone knows that movies aren't real. Movies tell stories that don't exist in the real world. Most movies don't even do this in a particularly original way. They usually follow formulas. So what, then, is the appeal of watching them? Do we all wish our lives were more exciting, or at least more understandable? The truth is that movies are entertaining. The reason so many people watch them is because movies can do all of the things that life can't, and they can do them in a quick and entertaining way. Life gives us originality, movies give us the comfort and satisfaction of the expected.

**The Power of Addiction**  
*Philip A. Betz, Undergraduate*  
*Dr. Jonathan Johnson, Creative Writing*

The following piece is short. It explores the mind of an addicted person and the extent to which the mind will go once the person decides to no longer be addicted. It also explores dreams and the creative inspiration that a dream can present.

**Poetry on Campus: A Panel Reading from EWU Student Poets**  
*Facilitator: Jeffrey Dodd, Graduate*  
*Jared Belden, Graduate; Sarah Hudgens, Graduate; Tania Van Winkel, Undergraduate; and Rachel Ross, Undergraduate*  
*Dr. Jonathan Johnson, Creative Writing*

Poetry, in the university, seems regularly assumed to be an art form more frequently studied than practiced. However, Eastern's Creative Writing Program, one of our Centers of Excellence, is a lively community that fosters creative development in its student writers. This panel concerns itself with providing a forum in which a representative group of poets from the Eastern student body may present their work; both Graduate and Undergraduate poets will share time and read poems they are currently working on.

**Fiction Panel**  
*Facilitator: Adam O'Connor Rodriguez, Graduate*  
*EWU Creative Writing Faculty*

Readings by a panel of Eastern’s fiction writers
Morning Oral Presentations
Room 102

Biology
Chemistry & Biochemistry
8:40
Alarm Calls in Ground Squirrels: Caller Recognition?
Jennifer Taylor, Graduate  
Dr. Margaret O’Connell, Biology

Colonial species such as ground squirrels issue vocalizations, or alarm calls, in response to predators. Recipients of these alarm calls often respond by increasing their vigilance thus enhancing their ability to detect a potential predator. However, increasing one’s vigilance may have energetic costs. For example, Columbian ground squirrels spend the majority of their time either feeding or on alert. These two activities are inversely proportional; as time spent in a vigilant pose increases, foraging time decreases. If individuals could differentiate between callers, they could adjust their response accordingly. A call from a neighboring ground squirrel might indicate that the predator poses an imminent threat, while a call from a non-neighbor, or stranger, ground squirrel might not be as evocative. A study comparing the alert responses of individuals to calls from neighboring versus stranger callers has indicated Richardson’s ground squirrels discriminate among callers. My study examines Columbian ground squirrels and their potential for caller discrimination by exposing individuals to calls from neighbors versus squirrels from a distant colony.

9:00
The Effect of Xylitol on Streptococcus Mutans Associated with Dental Caries
Russell Matheson, Undergraduate and Bobbi Teufert, Undergraduate  
Dr. Sidney Kasuga, Biology

Streptococcus mutans (S. mutans) is a bacterium known to cause tooth decay. The metabolism of various sugars by S. mutans produces two primary metabolic waste products, glycogen and lactic acid. Glycogen, an adherent molecule, facilitates the bacteria fixation to tooth surfaces. Lactic acid is the primary product implicated in enamel decay. This study examined the different metabolic effects that sugar and sugar substitutes have on the lactic acid production and cell proliferation of S. mutans. These changes were monitored using pH and optical density. The carbohydrates exchanged in the growth culture media in this study were sucrose, sorbitol, manitol, and xylitol. A distinct pH decrease throughout a 72-hour period was documented when S. mutans was cultured in sucrose, sorbitol and manitol relative to xylitol cultures. S. mutans, in the presence of xylitol, exhibited a reduced growth level when compared to the other carbohydrates. Xylitol either inhibited the utilization of other carbon sources and/or did not contribute to the production of acid by S. mutans.

9:20
Mobbing as an Avian Monitoring Mechanism
Licia A. Stragis, Graduate  
Dr. Margaret O’Connell, Biology

Monitoring provides abundance and species richness information useful for conservation and understanding habitat changes. Point counts are the current recommended standard for avian monitoring relying primarily on territorial behavior of birds but with observations restricted to early morning hours during the breeding season. Mobbing, the active convergence of birds to a predator, is a defense mechanism initiated by recorded calls of a potential predator. Mob count pilot studies demonstrated
increased abundance and species richness compared to point counts. Using a random block study, I compared abundance and species richness of mob counts using Northern Pygmy-owl recordings, to point counts in coniferous forests of NE Washington. During mob counts, 424 birds of 30 species were observed compared to 284 birds of 25 species by point counts. Mob count abundance per station was 50% higher. In-state Northern Pygmy-owl calls yielded significantly higher abundance and species richness compared to point counts. Morning mob counts were higher in abundance and species richness than afternoon counts, but neither index was significantly lower than point counts. Initial comparisons give encouraging support for mob counts as an alternative avian monitoring method.

9:40

Water Quality Analysis of Latah Creek

Raymond J. Kenney, Undergraduate and Zach Moore, Undergraduate

Dr. Jeff A. Corkill, Chemistry and Biochemistry

Latah Creek, which flows northwest from Tensed, Idaho into the Spokane River, is subjected to pollutants from agricultural practices and increasing urban sprawl south of Spokane, Washington. Samples have been taken from five carefully chosen locations along 32 kilometers of the creek from the Spangle area to the Marne Bridge just south of the Spokane River. Data was taken from February 2004 through the present, and was quantitated for physical (conductivity, turbidity, and temperature) and chemical (phosphate, nitrate, ammonium, calcium, and pH levels) parameters along the length of the creek so as to undertake source appropriation for the pollutants. This study will be used for a water quality assessment in conjunction with the Department of Ecology’s watershed management committees that are currently developing watershed action plans pursuant to the State Non-Point Rule (WAC 400-12).

10:00

Landowner Attitudes Towards Elk on Wildlife Refuge: Private Property Interface

Heather E. Fuller, McNair Scholar, Undergraduate

Dr. Margaret O’Connell, Biology

The subdivision of rural areas in the western U.S. not only increases potential wildlife-human interactions but might alter landowners’ perception of wildlife as previously urban/suburban dwellers move into these landscapes. When protected public lands are part of these landscapes, an additional factor is added because these lands potentially subsidize wildlife populations. This is the case in southeastern Spokane County, WA where several hundred Rocky Mountain elk utilize both private property and Turnbull National Wildlife Refuge. In contrast to other regional management units, elk populations in the unit surrounding the refuge have increased in recent years. Our research asks how property size and land use affect the occurrence of elk on private property and perceptions of landowners to the elk use. We surveyed 190 landowners surrounding Turnbull National Wildlife Refuge by mail or telephone with a response rate of 41%. Property sizes ranged from .2 acre to 4663 acres with a mean of 334 acres. Of the respondents 80% reported elk on their property. Elk occurrence was linked to livestock grazing. As property size increased, landowners’ perception towards elk became more negative.
10:20
Synthesis and Characterization of $\text{CuF}_2(\text{H}_2\text{O})_2(\text{pyz})$, \{pyz = pyrazine\}, A Quasi-2D Antiferromagnet

Marianne M. Conner, Undergraduate
Dr. Jamie L. Manson, Chemistry and Biochemistry

An aqueous mixture of Cu(NO$_3$)$_2$, NH$_4$F, and pyz {pyrazine}in H$_2$O at room temperature has resulted in the growth of transparent, light-blue, rectangular crystals. X-Ray crystallographic data show a crystal composition of CuF$_2$(H$_2$O)$_2$(pyz) which is a previously unknown compound. CuF$_2$(H$_2$O)$_2$(pyz) crystallizes in the monoclinic space group (P2$_1$/c), \((a, b, c) = (7.6926, 7.5568, 6.8970)\text{Å}\) and \((\alpha, \beta, \gamma) = (90.000^\circ, 111.065^\circ, 90.000^\circ)\). DC magnetization measurements assessed between temperatures 2 and 300 Kelvin indicates short range magnetic correlations due to interacting Cu$^{2+}$ ions. AC susceptibility measurements made at low temperatures show a long range antiferromagnetic phase transition below $T_N = 2.67$ K, while isothermal studies carried out at 2K and sweeping the magnetic field show an oscillatory response akin to single molecule magnets. Furthermore, muon spin relaxation measurements have been conducted to characterize the spin dynamics and magnetic ordering in CuF$_2$(H$_2$O)$_2$(pyz).

10:40
Positive Interactions of Two Invasive Species in Aquatic Ecosystems

Melinda A. Howard, Graduate
Dr. Margaret O’Connell, Biology

Typical of many biological invasions, the introduction of American bullfrogs into Washington State has led to population declines of native frogs through predation and habitat competition. Studies in western Oregon revealed that bullfrog survival is enhanced by the coexistence with a second invasive species, bluegill sunfish. These fish prey upon dragonfly larvae, a predator of bullfrog tadpoles. My study examined this potential interaction between bullfrog tadpoles, invasive pumpkinseed sunfish, and native dragonfly larvae in northeastern Washington. Forty-five tadpoles were introduced into 20 wood-frame enclosures divided into 5 replicates of 4 treatments: 1) tadpoles only; 2) tadpoles and fish; 3) tadpoles and dragonflies; and 4) tadpoles, dragonflies, and fish. Enclosures were placed in a slough for four weeks. Weights and lengths were measured for each species before placement in enclosures and again upon removal. Survival of tadpoles was higher in enclosures with fish alone and fish with dragonflies than in enclosures with dragonflies alone. Dragonfly survival was significantly lower in treatments with fish than with tadpoles only. Therefore, it appears that invasive fish are positively facilitating the survivorship of bullfrog tadpoles.
11:00

Food Habits of Lake Trout (Salvelinus mamykush), Burbot (Lota lota), Northern Pikeminnow (Ptychocheilus orgonensis) and Kokanee (Oncorhynchus nerka) in Bead Lake, Pend Oreile County, Washington

Derek Douglas Rader, Graduate
Dr. Allan Scholz, Biology

A baseline fisheries survey was conducted at Bead Lake from April-November 2004 using electrofishing, gillnets, fyke nets, funnel traps, and minnow traps. Annual food habits of lake trout, burbot, northern pikeminnow and kokanee were assessed. Dominant prey in lake trout (n = 27) were chironomids (midges) (98% by number) and kokanee (74% by weight). Dominant prey in burbot (n = 25) were chironomids (97% by number) and Astacidae (crayfish) (63% by weight). Dominant prey in northern pikeminnow (n = 123) were Daphnia (water flies) (97% by number) and Astacidae (75% by weight). Dominant prey in kokanee (n = 70) were Daphnia (64% by number). Food habit information was combined with data on fish age and growth, primary (phytoplankton) and secondary (zooplankton, benthic invertebrates) productivity, and water quality to determine factors limiting fish production in Bead Lake.
Morning Oral Presentations
Room 107

Sociology
Urban and Regional Planning
Physical Therapy
Social Work
8:40

Institutional Fit: Diverse Student Experiences and the Shaping of Academic Identity

Suzanne P. Lent, McNair Scholar, Undergraduate
Dr. Todd Hechtman, Sociology

Academic identity involves creating a self concept or “role associated behavior” through involvement in particular institutions such as education, family, economics, etc. Historical and current situational circumstances that influence a persons identity, as related to their educational aspirations and feelings of their role as “student,” create an academic identity. I reviewed literature pertaining to student experiences (including those which addressed forms of marginalization) of historically underrepresented and non-traditional students pre and post college enrollment. Non-traditional students for the purposes of my review were classified as one or several of the following: first generation, older students, who may or may not be in the workforce while attending school, as well as those students with children. Historically underrepresented on college campuses are students of color and women students. Non-traditional and underrepresented students shared similarities in their apprehensions of enrolling in a college/university; A sense of fitting in or “mattering” as well as a struggle with role transformation affected both equally. Differences that had to be overcome ranged from familial responsibilities and home life to ethnic and cultural biases.

9:00

The Economic, Social, and Health Effects of a Public Smoking Ban

Christina E. Wollman, Graduate
Dr. Charles Dotson, Urban and Regional Planning

Smoking in public places, such as bars and restaurants, is being banned in many communities and states. Studies have found that the air quality in a bar can be worse than the air during rush hour on busy highways or outside on low air quality days, and that non-smoking employees suffer health effects due to constant cigarette exposure. Smoking bans are being implemented in order to protect the health of employees and patrons. Studies have found that employee health and productivity has increased in businesses with smoking bans. Even with proven benefits, smoking bans are a debated and controversial subject. Opponents, such as smokers, restaurant associations, businesses, and cigarette companies, claim that bars and restaurants will suffer financially, however this fear has failed to materialize. Through research of health reports, news reports, and case studies of communities with smoking bans, I show that smoking bans are beneficial to employees and patrons while increasing profits and values of businesses.

9:20

Developing a Future: An Analysis of Economic and Development Trends in Cheney, Washington

Robert B. Jennings, Graduate
Dr. Dick Winchell, Urban and Regional Planning

The city of Cheney has weathered nearly a decade-and-a-half of growth during a time that has been a challenging period for many smaller eastern Washington cities. Still, for all the new growth and commercial development, the community is struggling. At the heart of that struggle lies the city’s evolving demographic and market forces. Over the years Cheney has developed more and more into two distinct sections. On one end of the spectrum lie the more affluent and
Morning Oral Presentations: Room 107

newer edge neighborhoods. These neighborhoods have grown significantly in the past few years, and as a result see significantly higher home values, a bustling commercial district, and a larger portion of the city’s families. At the other end of the spectrum are Cheney’s traditional or core neighborhoods. While seeing some growth, these neighborhoods are recognizing lower property values, an aging inventory of homes, and the expansion of a youthful collegiate population. The most obvious result of this decline has been the disinvestment in the city’s core commercial district.

9:40
Physical Therapy Management of a Patient with Patellofemoral Pain: A Case Report
Mark Allen Weinreich, Graduate
Dr. Ryan Mizner, Physical Therapy

Background and purpose: Patellofemoral pain, a type of knee pain, is one of the most prevalent disorders involving the knee. Although it is generally agreed that conservative treatment is the most appropriate initial treatment, there is a lack of consensus on the most effective treatment. The purpose of this case report is to describe the physical therapy management of a patient with patellofemoral pain using therapeutic exercise and manual therapy techniques (e.g. massage and stretching). Case Description: The patient was treated with strengthening exercises, joint mobilizations, stretching, and modalities (e.g. ice). Outcomes: The patient improved by having improved knee pain and strength, but improved minimally in her ability to do activities, as measured by two health questionnaires. These results may be limited because the patient developed a painful cyst behind her involved knee. Discussion: Based on the outcomes of this single case report, the physical therapy treatment program designed for this patient was effective and supports its use for a patient with similar symptoms.

10:00
Rehabilitation of a Patient with a Pectoralis Major Tendon Transfer to Replace an Irreparable Subscapularis: A Case Report
Michael E. Miller, Graduate
Dr. Darl Vander Linden, Physical Therapy

Pectoralis major tendon transfer to replace an irreparable subscapularis is a relatively uncommon procedure usually reserved for salvage of the glenohumeral joint. Since the rotator cuff muscles act as important dynamic stabilizers of the glenohumeral joint, pectoralis major tendon transfers are indicated in order to prevent constant anterior instability and preserve some mobility of the arm away from the body, where both anterior instability and decreased mobility can occur with loss of just the subscapularis. The patient examined was a 61-year-old male who was six months post operative from a pectoralis major tendon transfer. The patient improved active range of motion in flexion (45° to 71°), abduction (45° to 60°), external rotation (0° to 60°), and internal rotation (L4-L2). In addition, the patient’s strength increased and overall pain decreased in the involved shoulder. However, compared to the literature on tendon transfers, this patient’s improvements were not significant. Reasons for this could have included the patient’s age of 61 years, delayed rehabilitation post operatively, or long-term corticosteroid use by the patient.
10:20
Women and Gambling Addiction: Why Did They Stop?
Lucy Rivera, McNair Scholar, Undergraduate Research
Dr. Diane Davis, Social Work

This project analyzes the responses of women with serious gambling problems to an online-survey in which they answered a series of questions about the reasons they gambled and the reasons why they chose to stop. Problem and pathological gambling is often easy to conceal, because it is an addiction that others can’t smell, see or taste, even though the addiction often has disastrous impacts. Problem gamblers are defined as persons who may involve themselves in illegal acts and who continue to gamble regardless of the destructive consequences, while pathological gamblers show a loss of control over gambling, progression in occurrence or amounts of money wagered, and obsession with gambling or getting gambling money. Women who fit the characteristics of both categories participated in the survey. There were 126 women who fit the criteria ie. six or more months of abstinence. Their responses showed that the top five reasons these women quit gambling were: money issues, relationships, psychological distress, a suicide attempt, or they realized they needed to stop. This paper also supports the need for future research to be conducted on the treatment needs of women gamblers.

10:40
Wound Management for a Person with Rheumatoid Arthritis
Jennifer L. Bertagni, Graduate
Meryl Gersh, Physical Therapy

One to two percent of the population in the United States has Rheumatoid Arthritis, affecting women four times more than men. This disease causes chronic inflammation of the joints, and a drug commonly used to control this inflammation is Prednisone. Prednisone tends to have some undesirable side effects, such as the thinning of the skin and delayed time of healing once the skin is injured. This case report presents an 85 year old woman, who has Rheumatoid Arthritis and recently acquired a deep wound in her leg secondary to trauma. Physical therapists tried conventional wound healing techniques first, which included cleansing and bandaging the wound. When that was not very successful we decided to try a fairly new technique, the Wound Vacumm Assisted Closure device, to facilitate wound healing. With this intervention the rate of wound healing improved immensely and the patient was very satisfied with this treatment. By eight weeks the wound had completely healed.
Rehabilitation of Total Knee Arthroplasty in an Outpatient Physical Therapy Setting: A Case Study

Travis M. Greene, Graduate
Meryl Gersh, Physical Therapy

There are approximately 300,000 Total Knee Arthroplasty (TKA) surgeries performed yearly. This number is estimated to reach 475,000 by the year 2030. The main population that receives joint replacements are individuals over the age of 55 with severe osteoarthritis or rheumatoid arthritis. Physical therapy that focuses on quadriceps retraining and strengthening in combination with functional exercises (i.e. climbing stairs) has been shown to be effective during rehabilitation after TKA. The purpose of this case report is to describe the effectiveness of an outpatient physical therapy rehabilitation program after right TKA.

Healthy individuals performing functional exercises (ex. climbing stairs) have been shown to improve functional performance. Quadriceps strengthening rehabilitation programs following TKA has strong support in the literature for restoring function. In this case report, the patient demonstrated an increase in muscle strength evidenced by manual muscle testing, an increase in range of motion at the knee joint, and a decrease in pain level as measured by the McGill Pain Questionnaire after 6 therapy visits.
Morning Oral Presentations
Room 109

Modern Languages & Literatures
8:40-9:40 Sessions Presented in Spanish
English
History
<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Presented in Spanish</th>
<th>Speaker(s)</th>
<th>Abstract</th>
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<tbody>
<tr>
<td>8:40</td>
<td>Stereotypes of Spanish Gypsies in Literature from the Golden Age of Spain</td>
<td>Jesse J. Sánchez, Undergraduate</td>
<td>Dr. José María García-Sánchez &amp; Dr. Guillermina Walas-Mateo, Modern Languages and Literatures</td>
<td>Spain’s Gypsies, or Romani as they prefer to call themselves, are one of the best examples of a modern culture with an extensive history of persecution and marginalization. Since their arrival in Spain at the beginning of the 15th Century, they have suffered a continual barrage of stereotypes and prejudice. Of particular interest pertaining to this group is how they are represented in the literature of Spain at a time when culture flourished. How are they represented in the works of great authors such as Miguel de Cervantes? Does he help to enforce the stereotypes or does he break with them. Cervantes is famous for his social commentaries that are tied in with his different works. One of his Exemplary Novels, a short story entitled La Gitanilla, demonstrates this marriage of opinion and story telling and at the same time shares with the reader a vision of the character of the gypsies of Spain.</td>
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<td>9:00</td>
<td>Quetzalcoatl: Man or God?</td>
<td>Toni Cavagnaro, Undergraduate</td>
<td>José María García-Sánchez &amp; Dr. Guillermina Walas-Mateo, Modern Languages and Literatures</td>
<td>Quetzalcoatl, the famous plumed serpent in the Aztec Pantheon, which image and mythical story helped Cortés dominate that powerful empire: Was he a man or a god, or a little bit of both? By comparing and contrasting four Quetzalcoatl stories of Nahuatl origin we will get a glimpse of exactly who Quetzalcoatl, the man-god really was. Through these stories and knowledge of Aztec religion and culture, we will explore possible reasons for Quetzalcoatl being a man, and also explore the reasons that lead to his deification by the Mesoamerican people.</td>
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<td>9:20</td>
<td>The Influence of Positivism in the Works of Vicente Riva-Palacio</td>
<td>Allison Gamble, Undergraduate</td>
<td>José María García-Sánchez and Dr. Guillermina Walas-Mateo Modern Languages and Literatures</td>
<td>For this presentation I will observe the influence of Positivist ideas in some of the works of 19th century Mexican writer Vicente Riva Palacio. Particularly through his poetry and short stories we can see the configuration of nationalistic thoughts shaped by Positivist philosophy, which is not surprising for the period. Riva Palacio’s works engage in the</td>
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patriotic debates of the times by applying many of the Positivistic ideas that influenced the social and political intellectual milieu of the 19th century throughout Latin America.
9:40
John Keats and The Eve of St. Agnes: A Study in Contrasts
Julie M. Marr, Graduate
Dr. Christina Valeo, English

Images of striking contrast are prevalent in The Eve of St. Agnes as Keats employs color, temperature, and age to illustrate a world divided. These antitheses reflect the personal battles the poet endured during his lifetime and ultimately reveal the struggle between the reality of Keats’s life and the dreams of his heart.

10:00
Stuck in the Middle with Dreiser: The Realists and Naturalists Navigate between Reason and Instinct
Benjamin A. Johnson, Graduate
Dr. Judy Logan, English

The realist and naturalist writers of the late 19th and early 20th centuries appear to support very different views of humanity. However, all of these writers, from Henry Adams to Theodore Dreiser, include characters who are blind idealists. The difference is the manners in which these writers deal with these idealists is varied. Some can choose to follow a practical path while others are forced into following their idealism to destruction. I argue that all of these writers portray their characters as being trapped, as Theodore Dreiser describes, between instinct and reason. And due to the characters’ confused states, they come to see their ideals as practical and possible.

10:20
The House of Mirth: Exposing Edith Wharton’s Naturalistic Tendencies
Joanne F. Huffstutter, Undergraduate
Dr. Judy Logan, English

The novels of Edith Wharton are well established within the canon of late-nineteenth century Realism, situating her in the distinguished company of such authors as Henry James and William Dean Howells. Yet in The House of Mirth, her rendering of the pernicious environment of New York’s social elite, Wharton diverges from the Realist tradition and assumes a place beside Stephen Crane, Theodore Dreiser, and other Naturalists. While virtually identical in most aspects, the Realist and Naturalist novels differ significantly in their treatment of determinism and morality. It is through these defining characteristics that The House of Mirth differentiates itself from its Realist contemporaries. Specifically, the inhabitants of The House of Mirth are plagued by the Naturalist tendencies of fatalism and indecision, subjugating both their free will and their moral potential to environmental forces beyond their control. I will introduce Wharton’s Naturalist perspective through the text of The House of Mirth and references to related works, as informed by the author’s philosophical positions as stated in her personal letters.
10:40
Jim Crow: Dancing for Cain
Jenna Williams, Graduate Research
Dr. Dana Elder, English

Blackface minstrelsy spanned a century and was America’s first popular culture movement. The founder of blackface, Thomas Dixon Rice also known as “Jim Crow,” stole his blackface identity from a homeless man. Using the tattered clothes of a vagrant Black man, combined with burnt cork and a comical jig, Rice’s struggling acting career catapulted to success on the stage of New York’s Bowery Theatre in 1831. This presentation looks into the biblical symbolism of crows, linked with the success of the dance “Jump Jim Crow” culminating with a discussion of the laws created during the Jim Crow era of the South.

11:00
Marcus Wallace, McNair Scholar, Undergraduate
Dr. William Youngs, History

In response to movies like Outbreak and recent TV-made movies like Robin Cook’s Virus, the Ebola virus has captivated the attention of American audiences in many different ways. As a result, we see this deadly virus somewhat the same way we see a horror movie. Although we are initially scared by the effect that it could have on its victims, we are also intrigued by it because we feel like there is no possible way for us to be infected with the virus. Conversely, with a virus like HIV/AIDS that has hit closer to home, it stands out to us as a disease that is so frightening that most of the time we do not even talk about it. We have even made fictitious movies about conquering the Ebola virus (which we have not) while our depiction of AIDS in film is much more sobering. Why does our popular culture respond to these viruses very differently? Come to this presentation to find out!
Morning Oral Presentations
Room 114

Psychology
Public Administration
8:40
Extramarital Affairs as a Predictor of Marital Satisfaction
Sara J. Riley, Undergraduate, Catherine M. Gregory, Undergraduate, and Laura N. Ruge, Undergraduate
Dr. Kayleen Islam-Zwart, Psychology

Research has shown that there is a likelihood of lower marital satisfaction if extramarital affairs by either one, or both spouses, is occurring (Previti & Amato, 2004). This study utilized archival data collected as part of the National Comorbidity Survey (Kessler, 2000). It is hypothesized that individuals with spouses who engage in affairs will report less marital satisfaction than those with spouses who are not engaging in affairs. Results and implications will be analyzed using a Multivariate Analysis of Variance (MANOVA). Discussion and implication will be presented.

9:00
“I Don’t Mean to Sound Arrogant But...” The Effects of Disclaimers on Person Perception
Chris J. Myers, Undergraduate; Tamara L. Petersen, Undergraduate
Dr. Amani El-Alayli, Psychology

If a person uses the disclaimer, “I don’t mean to sound arrogant, but...” to preface something s/he is about to say, can that backfire by causing others to view the person as more arrogant? This study examined whether disclaimers help or backfire. We predicted that when making an arrogant statement, using a disclaimer would actually make people judge a person more harshly with regard to arrogance. Participants read a scenario about students discussing how difficult it is to get accepted into graduate school. In the scenario, a student made either an arrogant or nonarrogant comment about his/her likelihood of getting accepted. The comment was either preceded by the disclaimer above or not. Results supported our predictions showing that prefacing an arrogant statement (but not a nonarrogant statement) with, “I don’t mean to sound arrogant, but...” makes a person get judged more harshly with regard to arrogance. Thus, disclaimers can sometimes have the opposite effect on person perception than what is intended.

9:20
Exploring the Factors that Influence the Effects of Disclaimers on Person Perceptions
Tamara L. Petersen, Undergraduate; Chris J. Myers, Undergraduate
Dr. Amani El-Alayli, Psychology

Past research has shown that the disclaimer “I don’t mean to sound arrogant, but...” can have negative effects on person perception. We are currently conducting two studies to examine whether (1) a disclaimer might backfire more readily for a person in a stereotyped group, and (2) a disclaimer might have a positive effect when used with a justified comment. In Study 1, participants are presented with a scenario in which a French/Dutch student uses an arrogance disclaimer. Then the arrogance of the student is rated. We predict that the use of the disclaimer will have a stronger negative impact when the student is French. In Study 2, participants are presented with a scenario in which a person uses a rudeness disclaimer or no disclaimer before making a comment that is justifiably or unjustifiably rude. We predict that the disclaimer will have no effect or a positive effect when the comment is justified, but a negative effect when the
9:40
The Relationship between Human and Pet Attachment and Life Satisfaction
Amy L. Lystad, Undergraduate; Ann M. Whitehall, Undergraduate; Sara R. Adams, Undergraduate
Dr. Amani El-Alayli, Psychology

Previous research has failed to show a relationship between pet attachment and well-being. We hypothesized that although a traditional linear correlation does not exist, there would be a curvilinear relationship between pet attachment and well-being. That is, people who have extreme low or high levels of pet attachment would be lower in life satisfaction than those who have moderate levels of pet attachment. We further predicted that adult attachment style would account for this relationship. Participants completed measures of human attachment style, pet attachment, and life satisfaction. Results supported both hypotheses. Thus, contrary to past research a relationship between pet attachment and well-being does exist.

10:00
Gender Differences in Motivation of Sports Tasks
Kjersti M. Stenehjem, Undergraduate
Dr. Amani El-Alayli, Psychology

Past research has shown females participate in sports less often than males, partly because females have lower perceptions of their individual sports competence. We propose that sports motivation is also affected by people's perceptions of their own gender's sports competence. Participants rated the extent to which men or women perform better at a series of sports tasks and then rated their motivation to perform well at each task. To the extent that tasks were rated as being performed better by their own gender, participants reported more motivation to perform well at them. These findings have implications for understanding the disproportionate representation of males and females in certain sports.

10:20
Characteristics and Treatment of Female Sexual Perpetrators: A Literature Review of the Present Research
Crystal Contreras, McNair Scholar, Undergraduate
Dr. Kayleen Islam-Zwart, Psychology

Research on incarcerated females is rising due to the increase of female offenders within the prison population. The purpose of the present literature review was to examine the characteristics of female perpetrators of sexual offenses. Reported cases of sexual offenses by females appear to be low, however some psychologists believe that the actual numbers are much higher (Defrancis, 1969; Mongolin & Craft, 1989; Rowan, Langelier, & Rowan, 1988; in Hislop, 2001). Current literature suggests that there are five types of female sexual offenders 1) teacher-lover, 2) predisposed, 3) male-coerced, 4) experimental/exploitative, and 5) psychologically disturbed/psychotic (Christiansen &
Thyer, 2002; Matthews, 1998; Matthews, Matthews, & Speltz, 1989; 1991). Concurrently, gender-specific treatment programs for female offenders are limited and not readily available. One treatment program designed for females (Genesis II) has shown to be effective, however long term effects and recidivism rates are still unknown. Further discussion and elaboration will be presented.

10:40
Acculturation & Cultural Adaptation Pain in Native American College Students and Alumni
Alvina Cawston, McNair Scholar, Undergraduate; Nick Redding, Graduate
Dr. Gail Hicks, Psychology Department; Dr. Jacqueline Geddes, Counseling and Psychological Services; Theresa Martin, Office of Institutional Research
Demography & Assessment

Background: As part of a larger project on Native Americans in higher education, this portion of the project addresses the relationship between the acculturation process and mental health issues that result from experiences of racism. Using the Native American Acculturation Scale, we hypothesized that Native American students who are classified in the Traditional or Marginal categories of acculturation would demonstrate higher degrees of learned helplessness, cultural pain, and bigotry and lower levels of positive adaptation compared to students classified as Bi-cultural or Assimilated. Methods: Data is collected through survey using the Native American Acculturation Scale, the Cultural Adaptation Pain Scale and a brief demographic survey. Additional demographic data is obtained by archival retrieval through the auspices of EWU Institutional Research. Results: Correlations and t-tests are used to analyze data. Conclusion: This data is beneficial in understanding the mental health of Native Americans in higher education, so that specialized strategies may be developed to improve the retention rate of Native American students.

11:00
Dialectical Behavior Therapy and Motivation to Change
Holly Shockley, McNair Scholar, Graduate
Dr. Armin Arndt, Counseling, Educational and Developmental Psychology

Within the field of chemical dependency treatment there has been very little research done within the adolescent drug/alcohol using population and Dialectical Behavior Therapy. The purpose of this research was to determine if there was some quantitative motivation to change drug seeking behaviors within an inpatient adolescent chemical dependency treatment center, utilizing a multi-modal Therapeutic program with DBT and MET. The results of this research indicate that there is positive motivation to change both between intake and discharge according to a pre and post dependent samples T-Test done over a ten-month period.
11:20

Empathy and Sex-Role Inventory: MPA vs. MBA Students

Jon Panamaroff, McNair Scholar, Graduate

Dr. Lawrence Luton, Public Administration

At a time when the government and business interface, it is becoming increasingly important that managers in both sectors have an accurate perception of their employees. For years the public and private sectors have been borrowing information and management theories from one another, but over the past decade there has been a growing divide between the two administrative fields. This study will help administrators to understand the individual makeup of graduate level students and the reasoning behind their choice of either public or private administration. This paper focuses on the cognitive and emotional empathy of business and public administration students and differences between them in Gender-Role Identity.
Afternoon: Music & Film
2nd Floor Main Lounge
1:40
Addressing The Events Of September 11th 2001 Through A Multi-Stylistic Composition
Charles L Green, McNair Scholar, Undergraduate
Dr. Jonathan Middleton, Music

The "9/11 String Quartet" is a four-movement work for two violins, viola, and cello that focuses on the tragic attacks on the United States on September 11th. The first movement evokes the initial attacks, peacetime complacency, and religious fundamentalism within an abbreviated sonata form. Movement two is descriptive of the horror of trying to escape the world trade center towers. The movement uses a 12-tone method, which gives it a pointillistic sound. By contrast, the third movement uses minimalism to depict issues related to, censorship, the war on terrorism, and the rapid change from a more simplistic world view to one that is more complex. Finally, movement four in three sections; rondo, chorale, and romance shows the perseverance of the American spirit, by representing the history of the world trade center towers from their construction to the star-studded events that happened throughout the 28 years that they were standing.

2:00
Composing Music as Imagery
Christina Jill Pendleton, EWU Running Start Student; Medical Lake High School
Dr. Jonathan Middleton, Music

Music can be composed to evoke emotion or create imagery. Melody, harmony, rhythm, dynamics, and tempo are the composer's tools of representation. Combined with the composer's unique stylings, form and instrumentation, intended images and emotions can be projected to the listener. A piano project entitled, “The Quest” musically portrays a knight's journey through descriptive music. Blending unique and diverse melodies from ethereal to romantic, festive to haunting, eleven epic compositions were created to reflect a variety of moods. This presentation will explain and demonstrate the musical tools and techniques used to express the diversity found in pieces entitled Voyage, Time Swept, Shadowed Passages, Madrid etc. and how the mentoring process provides insight into orchestration.

2:20
Shades Of Hope: A Musical Interplay Of Bassoon & Marimba
Heidi McCormick, Graduate
Dr. Jonathan Middleton, Music

Contemporary art music is typically performed in university concert halls and received by an audience of music aficionados. My desire is to bring contemporary music to a university audience who may not regularly listen to modern works, but who enjoys interdisciplinary learning opportunities. The presentation will begin with a three-minute introduction to the process of composition, followed by a seven-minute performance, and closing with five minutes for questions and discussion.
2:40
“Romance” for Violin with Piano Accompaniment
Josh F. Czoski, Undergraduate
Dr. Philip Baldwin, Music

Romance for violin is a short piece, running three and a half minutes, that develops a few distinct themes in a modern romantic style. Several melodies are immediately introduced, and these evolve in complexity and intensity toward the strong conclusion. The form is rather pronounced and organized, and the technique quite methodical—the feel of the piece could be described as "rationally romantic." More than the vast majority of violin literature, the violin and piano are extremely cooperative, trading off main melodies almost if not completely equally, yet the result sounds perfectly idiomatic in this arrangement. This occurred mostly because the ideas were originally intended as a work for orchestra (a full-orchestra version of this piece is currently half-finished), and as a composer, I show favor to "making music" over showcasing the capabilities of an instrument and/or the performer. I wrote this piece without any training or independent research of any kind in composition or music theory—I learned strictly by ear from my influences and experimentation.

3:00
Ups & Downs
Matt J. See, Undergraduate
Advisor: Tom Mullin, Electronic Media and Film

An eager campaign worker puts all her energy to get George Nethercutt elected as a Senator. Knowing her zealous efforts are possibly futile, she continues her quest to put Nethercutt into office.
Afternoon Oral Presentations
Room 102

Anthropology
Geography
Economics
1:20
NAFTA- Chapter 11- Corporate Plutocracy: “Are Corporations the New Law Makers?”
Angela Johnson, McNair Scholar, Undergraduate Research
Dr. Fred Strange, Anthropology & Dr. Doug Orr, Economics

“Neoliberalism” is the label for the prevailing ideology of mainstream globalization and agreements like NAFTA are among the principle vehicles aimed at accomplishing its ends. Some have called these trade agreements the “Corporate Bill of Rights” because they give precedence to the rights of corporations rather than to the rights of nations-states, or to their non-corporate citizens. Chapter 11 includes provisions which allow corporations to sue nations and states for impeding their right to make a profit. These provisions were allegedly designed to protect foreign corporations from governmental expropriation of their investments. In practice, the resulting law suits have hindered states and nations ability to protect their environments and their citizens.

1:40
Africa in the 21st Century: The Changing Voice of Culture in Globalization
John T. Willis, Undergraduate, Keirsten E. Snover, Undergraduate, Jamie Litzkow, Undergraduate, Jon G. Fowler, Undergraduate, and Amber J. Pearce, Undergraduate
Dr. Jerry Galm, Anthropology

Africa in the 21st Century is being shaped through the intersection of two major forces: tradition-bound culture and globalization. In this paper the nation of Ghana is examined as an example of the challenges this interaction poses for the development of the entire continent. The modern challenges facing Ghana and Africa are illustrated through reviews of post-Colonial ideology, the changing face of the Ghanaian family, education, the role of traditional practices in culture, and modern health care. In each instance, the demands of the global community have accelerated the pace of change in Ghana and Africa at large, too often to the detriment of cultural survival and political stability.

2:00
Malaria in Africa: Is America Part of the Solution or Part of the Problem?
Keirsten E. Snover, Undergraduate
Dr. Jerry Galm, Anthropology

Each year most of the 300-500 million cases of malaria around the world occur in Africa, and about one million people die. Supporters of biomedicine commonly attribute the ongoing problem to biological factors such as drug resistance, or place the blame on cultural barriers that limit adherence to biomedical doctrine. Critical Medical Anthropology offers an alternative view of the malaria crisis, through a focus on the political and economic factors behind the problem. From this perspective, U.S. efforts to help are passed through a filter of capitalism, resulting in assistance that furthers an American agenda rather than improving the health of Africans. With its focus on
profits, this capitalist filter brings into question American morality and suggests elements of Social Darwinism.

2:20
Haunted by Gringolandia: Frida Kahlo as a Cultural Icon
Susan J. Goertz, Undergraduate
Dr. Julia Smith, Anthropology

Despite her vibrant lifestyle and revolutionary art, the Mexican artist Frida Kahlo died largely unrecognized and undervalued. Since her death the extremely personal nature of her art has elevated her to the status of icon. Today the iconography of Kahlo is largely based on viewing her as a victim of the “two accidents” in her life: her husband, Diego Rivera and the streetcar accident which nearly killed her at 17. More insightful perspective on the formation of the iconography of Kahlo could be gained by exploring the effect of the two drastically different cultures in which she most frequently enmeshed during her life, Mexico and the United States. I will explore how her art reflected these cultures, and how her iconography has been formulated within these cultures since her death.

2:40
Whose Social Capital is it? Deconstructing the Agendas Hidden in the Language of Social Capital
Shauna C Harshman, Undergraduate
Dr. Stacey Warren, Geography; Dr. Julia Smith, Anthropology

The term Social Capital has experienced a meteoric rise in the lexicon of not only academia, but international development agencies and policy makers alike in the past twenty years. Part of this rise may be attributed to the definitional flexibility of Social Capital. Part of this rise may also lie in the need to justify the policy and development choices of governments and corporations. The ideology of social capital as played out in the development arena, sees social capital as a cure-all for the problems associated with development. This paper will explore the origins of the ideology and language of social capital, as well as its darker policy implications. In the end I would posit that the value of social capital may be lost if operationalized to serve narrow interests.

3:00
How to Fund Exploration of Other Star Systems and Staving off the Collapse of Western Civilization
Richard R Baldwin, Undergraduate
Dr. Stacy Warren, Geography

Western culture is based on expanding with no limits and consuming resources as if they were infinite. This is not sustainable. Without the input of new sources of minerals, organic materials, energy, and water our little empire will exhaust itself. Existing institutions are too short sighted and bound in their worldview to find an adequate solution. The scale of resources required can only be met by human exploration of outer space. Independent funding is needed in order that all solutions be explored. I propose this can be funded through the entertainment industry. More specifically, this funding can be accomplished by building a space themed amusement
park. We start small with a video game, then move to micro theme parks and then to the large conventional amusement park. The profits from the amusement park would be used to fund a research foundation dedicated to human exploration of outer space.

3:20
The Real People: Indigenous Language Loss and Revitalization Among the Nimi’i Puu
Amelia Moses, McNair Scholar, Undergraduate
Dr. Jerry Galm, Anthropology

The direction of this presentation is to address the current condition of indigenous languages and to discuss the importance of indigenous language conservation and preservation within their respective communities. With the illustration of the Nimi’i Puu (Nez Perce) language being the main vehicle for examination, the audience will learn the process of language loss and how the history of the Nimi’i Puu People has impacted the current preservation efforts of the language itself.
Afternoon Oral Presentations
Room 107

Communication Studies
Government
American Indian Studies
Social Work
Sociology
1:20
Rhetorical Institution, Relevant Institution
Amanda M. Vert, Undergraduate
Dr. Patricia Chantrill, Communication Studies

Higher Education has been accused of promoting a liberal bias that translates to inappropriate influence on students. I contend education does influence students. This is, in fact, the reason students are sent to college. Education performs a rhetorical function. Instead of being reticent, education professionals should embrace the opportunity they have to influence leaders of the future. I will outline three suggestions that embrace the rhetorical nature of education. The first is that higher education must make media studies a mandatory subject area for all students. Second, a bifocal social orientation must be adopted. And third, education professionals must possess certain qualities. When my suggestions are students and the general public will benefit.

1:40
Apartheid Past and Present: Israel’s Wall, South Africa, and the Role of International Policies
Thomas P. Terrell, Undergraduate
Dr. Kristin Edquist, Government

Since the end of the 1967 Arab-Israeli War, the people of the Occupied Palestinian Territories (OPT - the West Bank and Gaza Strip) have languished under the increasingly unsympathetic policies of the occupying power, Israel. While many observers (including this presentation’s Advisor) may object to this comparison, recent developments in Israeli policy, in particular the construction of the separation barrier in the West Bank, have come to mirror many of the policies of Apartheid South Africa. The statistical evidence and UN voting record point toward a United States link between the fall of Apartheid in South Africa and its continuation in Israel and the OPT. Only when significant international pressure was applied, finally joined by the United States, did Apartheid subside in South Africa. This presentation answers the question: would significant U.S. and international pressure force Israel to abandon its clearly biased policies toward the Palestinian people?

2:00
Genocide of Identity: The Correlation between Native American Media-induced Images and the High Rate of Hate Crimes and Suicide in Native Communities
Kimberly R. Richards, McNair Scholar, Undergraduate
Dr. Deirdre Almeida, American Indian Studies

Since the moment of Western contact the images and cultures representing American Indians have been twisted in an effort to dehumanize, demoralize and ultimately fit non-native agendas. In the process media profiteers have distorted Indian identity to both the mainstream and Indian peoples. Whether to gain a political or economic edge, these caricatures, used to misrepresent Indian peoples, have only led to perversion, contempt, and mockery. This is very evident in national statistics revealing that “American Indians are almost three times more likely than the general population to be affected by violent crime” (Spindle 2002). These same images have also affected the self identity of Native peoples by comparing artificial stereotypes to actual people. Unable to
fit these synthetic images Native Americans are forced to question and even doubt their own identity. Thus the continued use of media-induced Native American images is not only repressive but another form of genocide.

2:20
Leaders of the Struggle: Commonalities between Dr. Martin Luther King and Tupac Shakur
Nicholas Russ, McNair Scholar, Undergraduate
Dr. Sean Chabot, Sociology

The black struggle has produced many voices that sought to articulate the pains of the black masses. Tupac Shakur and Martin Luther King were two of the greatest voices produced by this struggle. This paper explores the idea that these two great men had more in common than people realize. It asserts that by highlighting their similarities, a new foundation can be created for reconciliation between the Hip-Hop Generation and the Civil Rights Generation.

2:40
Politics of Genocide in the 1990’s: Semantics and Ethnic Identity in Yugoslavia and Rwanda
Rebecca Sutton, McNair Scholar, Undergraduate
Dr. Kristin Edquist, Government & Sean Chabot, Sociology

The conflicts in Yugoslavia and Rwanda are in fact very different, but the similarities between the conflicts have been overlooked and not analyzed thoroughly enough. In both situations politics use ethnicity to purposely create conflict. The conflicts in Yugoslavia and Rwanda since 1990 illustrate the politics of genocide as related to ethnic identity and semantics, in turn influencing actions of the state within the international community. The conflicts occurred in overlapping time frames, demonstrating the complexity of ethnic identity in framing a conflict as well as the power inherent in, but also the political problems involved with labeling conflict - in Yugoslavia as “ethnic cleansing”, in Rwanda as genocide. One of the similarities these situations share is neither term helped to make sense of the conflicts. The process of enacting ethnic cleansing policies is not different from policies of genocide. The importance of understanding the process as opposed to the terminology defines what the international community in law and in ideology will consider acceptable practices by the state upon its citizens in the 21st century.

3:00
A House Divided Cannot Stand: The Abortion Dispute in the American Federalist System
Ami Manning
Dr. Jeremy Bailey & Dr. Kristin Edquist, Government

In American political thought and action, democracy is at the center of discourse and meaning. Although in the federalist arrangement, there are different levels of democratic participation. The federal government and the states have different and sometimes conflicting powers. Morality policies were seemingly left to the states via the 10th amendment, although this has never been the last word on certain issues. The Supreme Court has overruled states in areas of education, equality, and widespread discrimination. The Supreme Court, moreover, is the defining authority on the federalist arrangement. The decisions made, interpret, define, and shape the roles of
the state and federal government and are not democratically accountable. The morality policies affected by Roe v Wade decision and subsequent court decisions on abortion, state laws, and national laws can tell us something about the limits and potentials for the American Federalist System on this volatile issue.

3:20
Don’t Ask, Don’t Tell, Don’t Harass, Don’t Pursue: An Analysis of How the Military’s Policy on Sexual Orientation Relates to Public, Military, and Human Rights
Alvin Smith, McNair Scholar, Undergraduate
Dr. Jennifer Stucker, Social Work

The ‘Don’t Ask, Don’t Tell, Don’t Harass, Don’t Pursue’ policy, commonly known as ‘Don’t Ask, Don’t Tell,’ has been in place for about 10 years. Although it is well documented that military leaders and officials recognized that gays and lesbians have in the past served honorably and diligently, open homosexuals are still banned from the United States military service. Homosexuals can serve as long as they stay closeted. Implemented by the Clinton administration as a compromise between Congress and President Clinton, the ‘Don’t Ask, Don’t Tell’ policy prohibits inquiry about an individual’s sexual orientation, but those persons who profess a gay orientation may be separated from the armed forces. Nevertheless, there are various situations where individuals are asked, pursued and administratively discharged in direct violation to the guidelines that are established by the policy. This paper contains a literature review of the history behind the exclusion of the homosexuals in the military and the rationale. This paper also reviews the debate of the ‘Don’t Ask, Don’t Tell’ policy and describes how it is implemented today according various organizations and committees that were established in connection with the policy. This review attempts to relate policy analysis of the ‘Don’t Ask, Don’t Tell’ with public, military, and human rights.
Afternoon Oral Presentations
Room 109

Creative Writing
Art History
English
1:20
Translating Differences: Discrepancies in the Iliad
Anne Peasley, Undergraduate
Dr. Jonathan Johnson, Creative Writing

For such a work as the Iliad to be appreciated today, it must first be translated. While every translator uses the ancient Grecian text as a template, each interpretation of the Iliad varies immensely, as each translator has his own style of writing; a translator has to balance what he reads in the original manuscript with modern English and his own view of the work. Careful comparison of translations by Robert Fagles and W.D. Rouse bring to the forefront the nuances and subtleties of the translation in each, showing how the differing styles and circumstances of the two translators affect the final portrayal of the work.

1:40
Ovid, Heloise, and Elenor of Aquitaine: A Medieval Feminist Triad
Denise R. Hinnenkamp, Undergraduate
Dr. Barbara Miller, Art

Medieval women were forced to embrace specific roles and behaviors dominated by the patriarchal practices of church and society. Several 11th and 12th century women broke out of these conformities and presented their society with new constructs that mirror current feminist ideas. Heloise is one, with her philosophical leanings and education, and Eleanor of Aquitaine another. Social characterizations and constructs of women centered on black and white premises of good and evil known as the “Mary / Eve” dichotomy. The literary sources of Ovid and The Letters of Abelard and Heloise reveal an Heloise that is neither of these and gives us a glimpse of the human side of medieval women. Furthermore, Heloise creates an outspoken critic and voice that demands redress. Post-modern psychological application of “stage of life theory” implies that Heloise’s grieving processes are more internal and complete, and she embraces a more successful end-of-life outcome than Abelard. This third perspective of women impacts the court of Eleanor and facilitates creation of images more holistic and humanistic within the International Gothic Style.

2:00
Lucy on the Dock
Alice E. Nelson, Undergraduate
Polly Buckingham, English

A modern fairy tale that tells of a woman's refusal to accept a fate with the socially ideal Prince Charmings who offer themselves to her over the course of one afternoon at the lake. This story explores the ambivalent feelings of a woman who must make a choice between the expectations of the society in which she lives and the desire to shape her own destiny.
2:20  
As They Might Be  
Katherine E. Sims, Undergraduate  
Dr. Judy Logan, English  

As an unknown, underrepresented author, Rebecca Harding Davis wrote many short fiction pieces that are still applicable to life today as well as in her day in the 1830s. She wrote of underrepresented and repressed people who could not achieve the life they wanted and led beige, flat lives which suppressed their true natures. Tracing this theme through several of her stories and tying this theme both to the 1830s and to modern times is the focus of the presentation.

2:40  
Recovering Mina: Reexamining the Poetry of Modernist Mina Loy  
Ruth Williams, Graduate  
Christopher Howell, Creative Writing  

The work of Mina Loy is often overlooked in the shadow of such major modern poets; however, her poetry represents a unique and valuable expression of modernist experience. Not only does Loy break stylistically from the Victorians, she also eschews traditional gender roles in her caustic portrayal of the confines of being female. Loy reacts against a society that asks women to express only segments of themselves at any given time; either lover or mother, intellectual or woman. Often, her poetry deals with her attempt to find a unified self, a whole identity via her art. Surprisingly, her struggle as a woman, intellectual, and artist is exceptionally similar to many of the artistic expressions of contemporary female writers; thus, it is infinitely worthy of study. The purpose of my presentation is to acquaint my audience with the poetry of Loy by briefly discussing her poetic treatment of female identity.

3:00  
Art and Letters: The Friendship of the Artist  
Albrecht Dürer and the Scholar Willibald Pirckheimer  
Sharon K. Wagoner, Undergraduate  
Dr. Barbara Miller, Art  

A friendship that crossed social barriers began when the artist Albrecht Dürer and the scholar Willibald Pirckheimer met in the social isolation of a merchant caravan traversing the Alps. Even after they returned to their homes in Nuremberg, the relationship between the knight and the craftsman continued as far more than artist and patron. Dürer was welcomed into Pirckheimer's home and allowed to use the famous library and even included in the learned discussions of Pirckheimer's humanist circle. This experience provided the talented artist with a sort of higher education. Pirckheimer even financed a second trip to Italy for Dürer, who was now able to better understand the learning Italy had to offer. Dürer mastered perspective, created works with a philosophical content, and wrote and published books, achievements that might have eluded him without Pirckheimer's support.
Later Additions: The Epilogue and Prologue of the Book of Job in Context

Sean T. Andrews, Undergraduate
Dr. Jonathan Johnson, Creative Writing

What is the purpose of the prologue and epilogue in the main text of the Book of Job? Are they necessary? Were they added later? What is the real meaning of the Book of Job? Historical context provides the evidence to hypotheses that the prologue and epilogue were a separate story that were added to the Book of Job after the main text was written in an attempt to soften the book's message. Understanding the real meaning of the Book of Job, then, requires an in-depth examination of our own soul and motives, a deep sense of faith, and a strong belief in a divine plan.
1:20
Swimming Through Melville’s Religious Thought: A Study of His Views as Present in Redburn, Moby-Dick, The Encantadas, and Billy Budd
Kerri Ladish, Undergraduate
Dr. Judy Logan, English

Herman Melville's attitudes reflecting his doubts regarding God's character can be seen not only throughout his writings, but also within the response writings of scholars, critics and avid Melvilleans. As such, Melvillean scholars from around the country have spent a great deal of time cataloging Melville's highly involved and complex dialogue regarding the nature of God, while simultaneously attempting to trace its path within the contexts and progression of Melville's various works. I myself will embark on this great and perilous journey into Melville's psyche, adding my voice to the myriad others, focusing specifically on Redburn, Moby-Dick, The Encantadas and Billy Budd as my sources of insight into Melville's evolving religious thought. I will argue that Herman Melville did indeed use these texts to openly discourse with himself and his readers regarding the universal questions surrounding the nature, existence, purpose, and benevolence of God, and that ultimately he arrives at a more poignant and hopeful viewpoint of deity in Billy Budd than he begins with in Redburn.

1:40
Determining Degrees of Credulity: The Role of Readers in Flann O'Brien’s At Swim-Two-Birds
Alicia Peaker, Undergraduate
Dr. Anthony Flinn, English

Flann O'Brien's metafictional novel At Swim-Two-Birds explores the active roles of readers in determining the level of their own belief and disbelief as they negotiate with the text. O'Brien's literary ideology is centered on the statement made by his narrator that a novel should be “a self-evident sham to which the reader could determine the degree of his credulity.” But because O'Brien will not allow readers to settle permanently into either submission to or defiance of the text, it is evident that he wishes to draw attention to the motion between the two rather than make a final judgment in favor of one or the other. O'Brien's novel allows readers to come in with preformed opinions. He then exposes their preconceptions, ridicules their dependence on established traditions, and then forces them to become active in determining the levels of their credulity.
2:00
A Study of Jane Austen’s Heroines: Male Counterparts as an Essential Element of a Traditional Romantic Novel
Amira Djulovic, Graduate
Dr. Christina Valeo, English

All of Jane Austen’s novels are written in the traditional style and format of romantic novel. As such, they contain a variety of elements, including a main female protagonist, a heroine, who, in accordance with tradition, goes through a number of challenges and difficulties. However, instead of realizing their own shortcomings and flaws, Austen’s heroines need a male counterpart to help them come to vital realizations, and to make the necessary changes. The male love interests provide the voice of logic and reason, moral guidance, various aspects of formal education, as well as parental influence and even substitution in some instances; thus, completing the heroines as characters. The reason behind this is that Jane Austen, as a traditional novelist, is aware of her readers’ expectations, as well as her historical, cultural, and social context.

2:20
Transformation and Existence in Seamus Heaney’s Poetry
W. Scott Cheney, Graduate
Dr. Grant Smith, English

Line by line and poem by poem – like bricks being stacked one upon the other – Seamus Heaney has developed into a master poet (winning the 1995 Nobel Prize in Literature). Heaney’s best poetry has developed over the years into “mature and ruminative” works that are formally precise and imaginatively profound (Foster 10). It is therefore not a stretch to say that Seamus Heaney is a different poet today than he was in 1966. Like the human body that replaces all its cells after seven years, Seamus Heaney has gone through a complete transformation as a poet, but he has not lost his existential center as a poet who is trying to get his most meaningful “feelings…into words” (Heaney 15). I will here endeavor to illustrate a number of these changes as they relate to the formal aspects of his work in “Digging” (the first poem of Heaney’s 1966 collection, Death of a Naturalist) and “The Haw Lantern” (the title poem of Heaney’s 1987 collection, The Haw Lantern).

2:40
Dues Ex Montrum: Herman Melville’s Captain Ahab and His Similarities to Monsters of Classical Mythology
Jeremy F. Huston, Undergraduate
Dr. Judy Logan, English

Herman Melville created a powerful character with the monomaniacal Captain Ahab of his novel, Moby Dick. Melville describes Ahab as a “grand, ungodly, godlike man” and presents him in similitude with several monsters of Grecian myth: the Theban Sphinx, Argus, Medusa, Charibdis, the Sirens, the Nemean lion, and the Cyclops Polyphemus. I show how Melville plays off of these creatures of myth to develop the more horrific aspects of Captain Ahab.
3:00
Ahab’s Metaphysics in Melville’s Moby-Dick
Michael D. Sterner, Graduate
Dr. Judy Logan, English

Critics often focus on the White Whale as the key to unlocking the meaning of Melville’s Moby-Dick. This approach is understandable. Captain Ahab relentlessly pursues Moby Dick throughout the novel, and it seems reasonable that an interpretation of the symbol of the whale would yield the novel’s meaning. Yet, just like the literal Moby Dick, the whale as a symbol is elusive. Melville’s use of “fire” as a symbol is much more crucial to understanding Captain Ahab and his motivation(s). This presentation will focus on the dramatic climax of the novel, Ahab’s obscure address to the “clear spirit of clear fire.” A close examination of “fire” as it relates to Zoroastrianism, Monism, and Gnosticism provides the route to meaning in Moby-Dick.
Poster Presentations
Room 302

Posters may be viewed from
8-11:30 a.m. and 1:15-4 p.m.

Poster Session with Authors
2-4 pm

Anthropology
Biology
Chemistry and Biochemistry
Computer Science
Geology
Physical Education & Health and Recreation
Physical Therapy
Psychology
1. Creating a Genomic Library of *Serratia proteamaculans* DNA in Order to Isolate a Zinc Resistance Gene

**Taylor B. Updegrove, Graduate**  
*Dr. Donald Lightfoot, Biology*

Potential bioremediation of the Spokane River includes precipitating out the soluble form of zinc to an insoluble, less toxic form. A soil bacteria found in the inland northwest, *Serratia proteamaculans*, has been found to precipitate Zn$^{+2}$ out of solution. The objective of our research is to isolate and characterize gene(s) expressed strictly in the induction phase of Zn$^{+2}$ resistance in *S. proteamaculans*. We are creating a genomic DNA library of *S. proteamaculans* to isolate the specific zinc resistance gene(s). Bioinformatics will then be utilized to determine the structure and function of any protein(s) coded by the induced gene(s). The structure and function of the protein(s) will potentially elucidate the mechanism of zinc resistance displayed by *S. proteamaculans*. This knowledge could be used towards understanding inducers and regulators that could convert non-zinc resistant strains of *S. proteamaculans* to the zinc resistant counterpart. This zinc resistant phenotype might be useful to convert Zn$^{+2}$ in the Spokane River to an insoluble and less toxic form.

2. Rapid Tissue Culture of Cassava (*Manihot esculenta*, Crantz)

**April Taylor, Graduate**  
*Dr. Donald Lightfoot, Biology*

Cassava is eaten by over 600 million people worldwide. Cassava grows with little care in poor soils but is plagued by disease and insects. Cassava varieties have different numbers of chromosomes, resulting in rare outcrossing and low fecundity. To overcome these obstacles to traditional breeding programs, genetic engineering can be used to confer disease and insect resistance. Friable embryogenic callus (FEC), a DNA transformable tissue, is the best cassava tissue for this purpose. I examined how atmospheric gas exchange and hormone levels affect growth. Cassava cuttings were larger when culture plates were wrapped with a gas permeable tape. A gradient plate experiment was used to determine optimal hormone levels for FEC development. Two varieties responded to high levels of hormone and two others responded best to low levels. I also evaluated untried tissue sources, to reduce the length of the tissue culture cycle. Meristematic tissue from the base of leaf petioles was successfully sterilized and grown, but did not produce FEC. A new culture formulation with the protein tryptophan is showing promise in generating FEC.

3. A Survey of the Aquatic Community in Clear Lake, Spokane County, Washington 2004

**Chris A Moan, Undergraduate**  
*Dr. Allan Scholz, Biology*

Fish, zooplankton and benthic macroinvertebrate populations in Clear Lake were surveyed. Lengths and weights were taken on each fish collected and stomach contents were collected from a representative sample of each species. 1,497 fish were collected by boat electrofishing, gill netting and fyke netting. Pumpkinseed (21.7%) were the most abundant, followed by brown bullhead (17.1%), largemouth bass (17.1%), rainbow trout (14.5%), black crappie (14%), tench (13.6%), brown trout (5.3%), goldfish (1.2%), walleye (<1%), and bluegill (<1%). Rainbow trout, brown trout, pumpkinseed, black crappie, and walleye growth was lower, and largemouth bass greater, than those reported in local lakes. *Daphnia* were the most abundant prey in diets of rainbow trout, brown trout, largemouth bass, and black crappie. Fish were the most important...
item in brown trout and largemouth diets. Pumpkinseed consumed chironomids and water mites. Three taxa of zooplankton were collected: Cyclopoid copepods (295.3L$^{-1}$), *Daphnia* (23.2L$^{-1}$), and calanoid copepods (3.2L$^{-1}$). Benthic invertebrae density averaged 3,900 organisms/m$^2$, composed of 44.2% annelids, 42.3% chironomids, 11.5% amphipods, and <1% each for water mites, mayflies, and clams. Management recommendations based on these data are presented.

4. Interactions of Downstroke and Expiration in Doves

**Milena Lilles, Casey Evans, Jennifer Baldwin-Bonney, Crystal Bulawa, Anna Paulsen; Undergraduates & Tammie Schrader, Cheney Middle School Teacher**

Dr. Dona Boggs, Biology

Boggs et al (1997) demonstrated that air sac pressure increases with downstroke and decreases with upstroke in flying magpies. Birds therefore tend to phasically coordinate wing beat and breathing cycles to ensure downstroke more often occurs with expiration and upstroke with inspiration. Pigeons take one breath with each wing beat. We investigated this further by asking the following questions: 1) Do smaller Columbids also exhibit a 1:1 relationship between wing beats and breaths? 2) Is it pectoralis or serratus muscle contraction that is primarily responsible for downstroke air sac compression? 3) Does this effect of down stroke reduce the need for force production by an expiratory muscle (external oblique)? We found that the ring-necked doves are 1:1; that the serratus muscle is active during down stroke and, when stimulated in the anesthetized bird, causes a greater increase in air sac pressure than stimulation of the pectoralis; and higher air sac pressures are achieved with less muscle fiber recruitment in the external oblique muscle during flight than during CO$_2$-stimulated breathing.

5. Longitudinal Studies of Water Quality of Hangman Creek

**Zach Moore, Undergraduate; Raymond J. Kenney, Undergraduate**

Dr. Jeff A. Corkill, Chemistry and Biochemistry

Hangman Creek, which flows northwest from Tensed, Idaho into the Spokane River, has been subjected to pollutants from agricultural practices for the past 50 years and increasing urban sprawl south of Spokane, Washington. Samples have been taken from five carefully chosen locations along 32 kilometers of the creek from the Spangle area to the Marne Bridge just south of the Spokane River. Data was taken from February 2005 through the present, and was quantitated for physical (conductivity, turbidity, and temperature) and chemical (phosphate, nitrate, ammonium, calcium, and pH levels) parameters along the length of the creek so as to undertake source appropriation for the pollutants. This study will be used for a water quality assessment in conjunction with the Department of Ecology’s watershed management committees that are currently developing watershed action plans pursuant to the State Non-Point Rule (WAC 400-12).

6. Antisocial Personality Characteristics

**Leith Mcleod Undergraduate; Lindsay Nord Undergraduate; Jessica Stettner Undergraduate**

Dr. Kayleen Islam-Zwart, Psychology

According to the DSM-IV antisocial behavior involves a "persuasive pattern of disregard or violation of the rights of others" (American Psychiatric Association, 1994, p.649-650). It is important to look at correlates of antisocial personality disorder because it is linked with criminal behavior, which could influence the way our justice system manages and identifies criminals. Past studies have illustrated that antisocials are geared towards being more social because they need to be to be manipulative to continue their predatory behavior. Extraversion is
one dimension of the 5-factor model of personality and individual differences. It is characterized by being talkative, assertive, and active, as opposed to silent, passive, and reserved (Durand, & Barlow, 2002). We hypothesize that individuals with antisocial personality disorder will show more extraversion than those without. This study utilized archival data collected as part of the National Comorbidity Survey (Kessler, 2000).

7. The Role pf Gender in Sexual Desire among Depressed Individuals
Heather N. Lewandowsky, Undergraduate; Elle K. Marsh, Undergraduate; Sunny L. Muirhead, Undergraduate
Dr. Kayleen Islam-Zwart, Psychology

Research has found that individuals suffering from mild to severe depression experience a loss of interest in sex, but no loss in sexual functioning (Lief, 1986). This study investigated the difference in depressed males and females and their desire for sex. This study utilized archival data collected as part of the National Comorbidity Survey (Kessler, 2000). It was expected that females in both conditions would report more of a loss in sexual interest than the males.

8. The Impact of Family Structure on Adolescent Substance Abuse
Heather Rogers, Undergraduate; Katrina Russell, Undergraduate
Dr. Kayleen Islam-Zwart, Psychology

Despite the educational programs, substance abuse among teenagers is still an ongoing problem in this country. Between 1997 and 2003, marijuana, cocaine, and other substance abuse increased among adolescents (Weissberg, 2004). To help us understand why some teenagers are so susceptible to substance abuse, we wanted to look at family structure. We believe that single parent families are an indicator of increased substance abuse among adolescents. Specifically, we examined the relationship between family structure and the rate of substance abuse between the ages of 13 – 18 years old. This study used archival data collected as part of the National Comorbidity Survey (Kessler, 2000).

9. The Prevalence of Depression in High Risk Behavior Leading to the Contraction of HIV
Ann M. Whitehall, Undergraduate; Tessa Nelson, Undergraduate
Dr. Kayleen Islam-Zwart, Psychology

Patients infected with HIV have been found to have a prevalence of depression reaching 57.3% (Anonymous, 2004). This led us to believe it necessary to look at the significance of depression in those prior to HIV infection. The likelihood of these individuals engaging in high-risk behavior leading to the contraction of HIV is also examined. Depressed individuals were expected to express less confidence in their ability to avoid high-risk behavior (Shrier, Harris, Steinber, and Beardslee, 2002). In turn, those individuals with depression would engage in more frequent and intense high-risk behavior than those without depression. This study utilized archival data collected as part of the National Comorbidity Study.

10. The Effects of Social Support on Marijuana Use
Lucinda R. Mack, Undergraduate, McNair Scholar; Steffani Ortega, Undergraduate; Alvina M. Cawston, Undergraduate, McNair Scholar
Dr. Kayleen Islam-Zwart, Psychology

Poster Presentations: Room 302
In many pathological disorders studied in the field of psychology, the construct of social support can be linked to not only predicting factors, but effective treatment outcomes as well. The idea of social support has varying levels, from an adequate amount, to none at all. In this analysis of previously collected data (Kessler, 2000), we hypothesize that marijuana users will evidence a higher rate of use if they identify as having more social support from friends rather than relatives. Additionally, we expect that female users will evidence higher rates of use, than male users. The role of friends and family of marijuana users is pivotal in addressing the problems of marijuana usage. Much of the past literature has attempted to break down the internal components of the social networks of the user, with respects to gender. Female users tend to have larger support systems than male users (Wills, Resko, Ainette, Mendoza, 2004). This project will examine the make up of the user’s social support system and the severity marijuana use.

11. Effects of Bipolar Disorder on Interpersonal Relationships

Chris J. Myers, Undergraduate; Tamara L. Petersen, Undergraduate; & Ashley H. Stranberg, Undergraduate

Dr. Kayleen Islam-Zwart, Psychology

Our research builds on past studies examining the effects of Bipolar Disorder on family relationships and social life. Reinares and Vieta (2004) reported negative effects on family members of individuals diagnosed with Bipolar Disorder. These members usually become caregivers, which proves to be a stressful and demanding task. We compared literature reviews regarding the effects of a patient’s Bipolar Disorder on their social relationships to the data collected as part of the National Comorbidity Survey (Kessler, 2000). We predict that people with Bipolar Disorder, as compared to people without, would report less social support and less supportive relationships.

12. Recognizing Alcoholism through Lack of Education

Tiffany D. Rideout, Undergraduate; Natalee M. Gilbreth, Undergraduate; Nick P. Reid, Undergraduate

Dr. Kayleen Islam-Zwart, Psychology

The purpose of this study is to examine whether a person with no higher education is more likely to abuse alcohol than a person who has completed a college degree. Although there are many studies involving college students and their alcohol use, no study to our knowledge has assessed information on this exact topic. Studies involving college students and alcohol abuse often predict a high likelihood of alcoholism in the future (Yu, 2003). Our study examines whether knowledge gained through higher education may be a powerful factor for graduates to avoid alcoholism. This study utilized archival data collected as a part of the National Comorbiditiy Survey (Kessler, 2000). We predict that people who have higher education are less likely to abuse alcohol due to factors such as work ability, knowledge, and achievement, as compared to people without a college education.

13. Fear Reactions in Male and Female College Students as a Result of Sexual Abuse History

Yurema Cortez, Undergraduate, McNair Scholar

Dr. Kayleen Islam-Zwart, Psychology

According to the National Research Council’s Panel of Child Abuse and Neglect, there is little research on gender differences regarding the consequences of child sexual abuse (Thompson, Kingree et al. 2004). Despite this, Hanmer and Saunders (1984) have demonstrated that women fear violence, particularly sexual violence, more than men. Previous research has also shown
that fear and anxiety are the most commonly observed reactions following sexual assault (Resick, 1982). The purpose of the current study is to investigate the fear reactions of male and female college students as a result of childhood and/or adult sexual abuse history. Our assumptions are similar to the finding of the above in that we are hypothesizing females will show a greater fear reaction than males. Additionally, it is expected that college students with a history of sexual abuse will show greater fear reactions than those without such a history. Data has been collected for 134 participants to date and will continue.

14. Alcohol Dependence and High Risk Behavior

Meghann M. McEvoy, Undergraduate; Ryan F. Ransom, Undergraduate; Karen S. Rawlins, Undergraduate; Lynn A. Whelpley, Undergraduate

Dr. Kayleen Islam-Zwart, Psychology

The present study examined the relationship between alcohol dependence and high risk behaviors. High risk behaviors are defined as those that cause significant physical harm to oneself or others and include automobile accidents, DUI, pregnancy complications, birth defects, intravenous drug use, needle-sharing, STD’s, accidents/physical injuries, assault and rape. Learning more about the relationship between substance abuse and high-risk behaviors is the first step in determining effective educational and treatment goals for reducing the negative effects of both the substance abuse and the risky behaviors. Our hypothesis is consistent with the literature published in this field in that there is a relationship between alcohol dependence and high-risk behaviors. This study utilized archival data collected as part of the National Comorbidity Survey (Kessler, 2000).

15. A Comparison of Optimism and Attributions between College Students and Unemployed Adults

Darlene E. Berner, Graduate; Lindsey Carr, Undergraduate

Dr. Mahlon Dalley, Psychology

Unemployed adults seeking government assistance and college students as part of a screening were administered the Attribution-Optimism Scale (AOS). College students exhibited significantly higher optimism and attributions than the unemployed. The AOS shows promise as an instrument measuring optimism and attribution. The unemployed adults were also administered the Minnesota Multiphasic Personality Inventory-2 (MMPI-2) which was used for a validity check of the AOS. Correlations supported the validity of the AOS in that strong negative correlations were obtained on measures assessing depression, anxiety, alienation and introversion (e.g., MMPI-2 subtests). An interesting finding was the AOS also had strong negative correlations with MMPI-2 scales that purport to measure over reporting of symptoms (e.g., possibly malingering) and faking bad (MMPI-2 scales F, K, and F-K). Exploratory correlations occurred for the Mental Status Exam, the Wechsler Adult Intelligence Scale-III, and the Work Potential Profile. No significant correlations were found between the AOS and these instruments. This provided evidence as to the AOS discriminant validity because there would be no reason to suspect optimism and attributions relate to cognitive ability.

16. Comparing Two Methods for Dissociating Conscious and Automatic Memory Components

Samantha M. Brophy, Undergraduate; Meghann M. McEvoy, Undergraduate; Jennifer J. Moore, Undergraduate; Lynn A. Whelpley, Undergraduate

Dr. Leonard Stern, Psychology

Memory performance can be based on a conscious (C) or an automatic (A) component. Although Jacoby’s Process Dissociation Procedure (PDP) is intended to give separate estimates
of these memory components, it has been shown to give flawed estimates of A when subjects both read a word and then generate an association to the word. This study examined whether an alternate procedure, the Guided PDP (GPDP) gives more appropriate estimates of A. Compared to a study condition in which subjects had to read a list of words, a study condition that required subjects to read each word and generate an associated word was found to produce (inappropriately) lower estimates of A when memory was assessed with Jacoby’s PDP but not when it was assed with the GPDP. This and other results indicate the GPDP may give more appropriate estimates of A than does the standard PDP.

17. The Relationship of Intrinsic and Extrinsic Religiosity to Posttraumatic Growth
Amy E. Brodhead, Undergraduate; Ryan Ransom, Undergraduate; Cassie Marek, Undergraduate
Dr. Philip C. Watkins & Dr. Russell L. Kolts, Psychology

The present study examined various religious orientations and their relationship with posttraumatic growth (PTG). Ninety-four college students, selected based on prescreening for trauma experience, completed the Allport-Ross Religious Orientation Scale, the Quest scale, the Posttraumatic Growth Inventory, the Stress-Related Growth Scale, and the Doctrinal Orthodoxy Scale. As predicted, intrinsically religious individuals were more likely to report experiencing PTG following a traumatic event than extrinsically religious individuals. Additionally, a positive relationship was found between doctrinal orthodoxy and measures of PTG. The Quest scale was not related to posttraumatic growth. The current results support the importance of attending to issues of religion and spirituality when working with individuals who have experienced a traumatic event.

18. Responses to Sexual Coercion: Impacts of Gender Socialization and Relationship Context
Ginger Faulkner, Alumnus; Jessica Meek, Graduate; Rich Hedrick, Undergraduate; Kyra Kolbeck, Undergraduate
Dr. Gail F. Hicks & Dr. Russell L. Kolts, Psychology

The purpose of the current study was to examine how long young women of different gender role orientations (traditional versus nontraditional) would allow a simulated coercive sexual situation to continue. It was hypothesized that individuals with traditional beliefs would choose to stay in a sexually coercive situation longer than those with nontraditional beliefs. Additionally, this study examined how the relationship of the perpetrator to the victim impacts the length of time the victim decided to stay in a coercive sexual encounter. While no significant effect was found for gender role orientation, women who were making judgments about a “boyfriend of 6 months” indicated that they would stay in a sexually coercive situation significantly longer than those in the “first date” scenario.

19. Effects of Stereotype Cueing on Rape Attributions and Victim Blame
Kelli Rossi, Graduate; Lucinda Mack, McNair Scholar, Undergraduate; Amber Daniel, Undergraduate; Bridget Eubank, Undergraduate
Dr. Yuma Tomes & Russell L. Kolts, Psychology

Racial stereotyping and rape myths are a part of our social consciousness that may potentially affect the decisions people make regarding sexually coercive situations. In rape situations, the perpetrators’ and victims’ race play a part in whether they are believed, prosecuted, and in their
sentencing. In this study, the names of the perpetrator and victim in a vignette depicting a rape were varied in an attempt to subtly activate racially-based stereotypes. Results indicated that participants endorsed higher levels of victim blame and general rape myth endorsement when the perpetrator was identified with a stereotypically “white” name.
20. Trauma and Startle Reflex: Emotion in College Students with Posttraumatic Stress Disorder

Sommer L. Kraft-Purvis, Undergraduate; Jessica J. Tracy, Alumnus; Jennifer Hegel, Undergraduate; Kyra Kolbeck, Undergraduate

Dr. William C. Williams & Dr. Russell L. Kolts, Psychology

In this study, the startle blink paradigm was used to compare the emotional experiences of students with Posttraumatic Stress Disorder (PTSD) to the emotional experiences of a non-PTSD control group. Pleasant, unpleasant, and neutral images from the International Affective Picture System (IAPS) were presented to 19 participants, 9 of whom met criteria for PTSD and 10 of whom had a history of trauma but did not experience symptoms of PTSD. Each participant experienced acoustic startle stimuli (95-dB bursts of white noise) while viewing some of the images. Startle magnitude, as integrated electromyographic (EMG) activity from the orbicularis oculi, was used to determine the effects of the affective valence of the images on the physiological responses of the participants. A repeated-measures ANOVA revealed significant main effects of both trial and affective image, replicating the occurrence of habituation and the effectiveness of IAPS images. As a whole, the PTSD group actually demonstrated lower startle responses than the control group. Additionally, the two groups differed in two highly suggestive ways. The PTSD group responded to the images with smaller blink magnitudes, suggesting the presence of emotional numbing, especially when viewing aversive images. In addition, the PTSD group initially showed a similar response when viewing both negative and positive images, which, while not statistically significant, suggests a possible inability for those experiencing PTSD to initially discriminate between different emotionally salient stimuli.

21. A Physical Therapy Approach To The Treatment Of Adhesive Capsulitis: A Case Study

Ingrid C. van Anrooy, Graduate
Elaine Patton, Physical Therapy

Adhesive capsulitis is the spontaneous onset of gradually progressive shoulder pain and severe limitation of movement. This very common, self-limiting condition is often treated through physical therapy with little support of its' efficacy. Therefore, the purpose of this case report was to describe the physical therapy management of a patient with adhesive capsulitis of the shoulder and the outcomes. The patient was a 72-year-old woman with left shoulder restriction in a capsular pattern and pain with movement of her left shoulder joint. These impairments prevented her from participating in her role as a homemaker. We utilized patient education, a Home exercise program, ultrasound, passive range of motion, gentle stretching, joint mobilizations, and resistance exercises in attempt to successfully treat this patient’s condition. Although the literature does not support these interventions to be effective and instead suggests that outcomes may be more reflective of the self-limiting nature of the condition than the intervention itself, following nine-weeks of therapy the patient demonstrated increased motion and increased functional ability. In conclusion, this case report describes that following a period of physical therapy individuals with adhesive capsulitis can show moderate improvement.
22. Adult Attachment Styles and Perceptions of Infant Emotions
Clare Lucas, Alumnus; Kjersti Stenehjem, Undergraduate; Darlene Berner, Graduate; Rich A. Hedrick, Undergraduate
Dr. Russell L. Kolts & Pamela Barnes, Psychology

Previous research has suggested that women with secure adult attachment styles perceive emotions differently than do women with insecure adult attachment styles. The current study sought to investigate whether or not women having different attachment styles would differ in their interpretations of infant emotions. Two different self-report measures of adult attachment were used, as well as the IFEEL Picture Set. Results indicated no significant differences between secure and insecurely attached women in identifying infant emotions.

23. The Relationships between Human and Pet Attachment and Life Satisfaction
Amy L. Lystad, Undergraduate; Ann M. Whitehall, Undergraduate; Sara R. Adams, Undergraduate
Dr. Amani El-Alayli, Psychology

Previous research has failed to show a relationship between pet attachment and well-being. We hypothesized that although a traditional linear correlation does not exist, that there would be a curvilinear relationship between pet attachment and well-being. That is, people who have extreme low or high levels of pet attachment would be lower in life satisfaction than those who have moderate levels of pet attachment. We further predicted that adult attachment style would account for this relationship. Participants completed measures of human attachment style, pet attachment, and life satisfaction. Results supported both hypotheses. Thus, contrary to past research a relationship between pet attachment and well-being does exist.

24. Conservative Intervention for Shoulder Impingement with Secondary Partial Rotator Cuff Tear
Jami L. Bean, Graduate
Dr. Byron Russell, Physical Therapy

Shoulder impingement occurs when there is compression of the rotator cuff tendons between the head of the humerus and the coracoacromial arch. It is found to occur in approximately 71% of all shoulder injuries. Partial rotator cuff tears are twice as common as full-thickness tears and occur in 13-37% of shoulder dysfunction. The purpose of this research project was to explain the physical therapy interventions used for shoulder impingement with a secondary partial rotator cuff tear in an 18 year-old male athlete. Interventions targeted the patient’s impairments and functional limitations. They included neuromuscular development training/movement pattern training, postural adjustment, therapeutic exercise, and body mechanics education. After eight visits the patient demonstrated significant improvements in function and activity/participation activities. However, the patient continued to present with signs of instability of the shoulder joint and was later diagnosed with a type II superior labrum anterior posterior (SLAP) lesion.

Kari B. Bolton, Graduate
Dr. Tanya LaPier, Physical Therapy

Fall prevention in older adult populations is an important part of physical therapy interventions. An exercise-based component of multifactorial fall prevention programs for elderly living in community, residential, and nursing home settings have been shown to reduce the number of falls and numerous sequelae. The purpose of this case report is to describe a home health physical therapy fall prevention program for a 76 y/o woman living in an adult family home who was deconditioned with recurrent falls. Rehabilitation consisted of therapeutic exercises, and bed mobility, transfer, and gait training to help achieve the patient's goal of “increased ability to stand and walk.” Over 8 weeks, the patient improved so that she was independent in transfers, bed mobility, and gait and had an overall increased functional score on the nurse-administered Outcome Assessment Information Set. Similar results from exercise-based fall prevention programs have also been demonstrated in studies involving older adults. More research is needed in terms of home health physical therapy and in fall prevention programs for those living in adult family homes.

26. Physical Therapy Management of a Traumatic Cauda Equina Injury During Inpatient Rehabilitation

Irene Bryant, Graduate Student
Dr. Byron Russell, Physical Therapy

The cauda equina consists of lumbar and sacral nerve roots that join together in the spinal canal. Injuries to the cauda equina are of rare occurrence and typically require surgical intervention. Little information is known regarding non-surgical management of these injuries. Physical therapy was provided for a patient who sustained a gunshot wound to the lower back with resultant cauda equina injury. The patient presented with muscle weakness and paralysis, impaired mobility and transfers, and diminished sensation. Various exercises and activities were chosen to address the patient's limitations. Following completion of therapy, the patient demonstrated some return of muscle strength, sensation, and improvement in functional activities. There was no change in the paralysis of muscles following therapy.

27. Physical Therapy Interventions after Spinal Fusion

Danielle L. Chantiny, Graduate
Dr. Ryan Mizner, Physical Therapy

Spinal fusion is a surgical procedure in which bone graft and instrumentation is inserted to prevent motion between two unstable vertebral segments. This procedure is performed when conservative treatment has failed to relieve a patient's back pain and/or associated leg symptoms. Both the fusion procedure and back pain itself are associated with decreased performance of the stabilizing musculature; thus, a back stabilization program is often beneficial. The purpose of this case report is to describe a typical rehabilitation program after low back spinal fusion surgery. Case Description: A seventy-two year old female complaining of back pain with radicular symptoms into the legs underwent a low back fusion and was subsequently referred to physical therapy. Interventions: The patient was instructed on core stabilization of the transversus abdominus muscle with progression to dynamic activities performed in a pool and on land. Outcomes: The patient’s functional index measure improved from 20/100 to 68/100 and the pain scale improved from 4.2/10 to 0.4/10. Her gait improved from walking with a mild hip drop while using a walker to using a cane without a hip drop.
28. Physical Therapy Intervention for a Child with Down Syndrome:
A Case Report

Rebecca M. Cheney, Graduate
Dr. Darl Vander Linden, Physical Therapy

Down syndrome (DS) is a prevalent inherited chromosomal disorder. It occurs once in every 700-800 live births. The purpose of this case report was to describe the physical therapy intervention for a two-year-old boy with DS. The patient was a two-year-old male child diagnosed with DS, atrial septal defect (ASD), hypothyroidism, and developmental delays. He had decreased strength and endurance, decreased balance in weight bearing positions, and general developmental delays. The physical therapy interventions included a home management program (including family education), self-care, therapeutic exercise, manual therapy, and gait training. The patient met his short-term goals and more demanding goals were initiated with him. The long-term prognosis for this patient was hard to determine, yet literature suggested that early intervention programs and high parental involvement appear to have a positive long-term effect on individuals with Down syndrome.

29. Rehabilitation Following an Evans Calcaneal Osteotomy

Ange A. Stainbrook, Graduate
Meryl Gersh, Tanya LaPier, Dr. Darl Vander Linden, Physical Therapy

Background: Although pes planus is common throughout the world, treatment is rarely needed. When a patient complains of pain secondary to pes planus, conservative treatment is the first option. In the rare event that conservative treatment does not relieve the symptoms, surgical intervention is considered. The purpose of this case report is to describe physical therapy interventions following an Evans calcaneal osteotomy. Case Description: The patient came to physical therapy following an Evans calcaneal osteotomy and gastrocnemius lengthening that led to 8 weeks of immobilization. He demonstrated weakness in all ankle musculature and limited plantarflexion. He complained of pain with ambulation and an inability to participate in recreational activities. Our interventions focused on strengthening, increasing/maintaining range of motion (ROM), balance training, a home exercise program, and modalities. Outcomes: The patient demonstrated an increase in ROM and strength at the ankle and an increase in functional activities, as noted by his Therapeutic Associates Outcome System form. He reported a decrease in pain; however, he still showed some limitations. Discussion: Research is limited for physical therapy interventions following this surgery. Therefore, it was difficult to compare these results with the literature available.

30. Student Responses to Quackery in Health and Fitness

Ramin Roby Robinson, Graduate; Jenelle Walker, Graduate; Allen Levine, Graduate
Dr. Jeni McNeal, Physical Education, Health and Recreation

Many authors have reported results about the beliefs of the general population regarding paranormal or “pseudoscientific” concepts such as aliens, astrology, and therapeutic touch. The field of health and fitness is one area in which fraudulent and questionable practices are rampant. The purpose of this investigation was to compare the responses of college students from different academic backgrounds on a survey of health and fitness-related statements. Student respondents were recruited from a senior Exercise Science course (n=28), senior Biology (n=19), and a General Education humanities course (n=56). In addition to demographic information, subjects were asked to respond to 18 statements regarding health and fitness, from 1 (strongly agree) to 5 (strongly disagree). Of the 18 statements, 3 were included that are generally accepted as “true” within the health and fitness profession. The remaining 15
statements represented statements of questionable scientific merit based on research literature in the area. Descriptive and comparative results will be presented and a discussion of the questionable statements will be included.

31. Effectiveness of Stiff Insoles on Sprinting Performance: A Pilot Study

**Allen Levine, Graduate; Roby Robinson, Graduate**

*Dr. Jeni McNeal, Physical Education, Health and Recreation*

During foot contact in sprinting, the small bones of the foot undergo considerable deformation. The amount of force the foot produces during push-off is important for determining performance time. Recent investigations have suggested that experimentally increasing the stiffness of the shoe insole may lead to improved performance, perhaps by increasing the amount of force transferred from the foot to the track. The purpose of this study was to investigate the effect of increased insole stiffness on sprint performance in a small group of collegiate track and field sprinters. Eight sprinters performed two maximal effort 40 meter sprints on each of three days using either their regular sprint shoes, or with the addition of a medium or high stiffness insole. Preliminary results showed a significant effect across test days regardless of experimental condition. This effect is likely to overwhelm the expected small effect size of the experimental insoles. Results will be discussed for individual subjects, and possible confounding variables will be presented.

32. A Petrographic and Geochemical Study of The Mount Spokane Pluton and Associated Dike Rocks at Dart Hill, Spokane County, Washington

**Shawna L. Ernst, Undergraduate**

*Dr. Jennifer A. Thomson, Geology*

Dart Hill is an exposure of the Cretaceous Mount Spokane batholith, located just north of Spokane in the Dartford 7.5 minute quadrangle. The locality is dominated by medium- to coarse-grained two mica granite. The extensive outcrop along the east side of Dart Hill on Highway 395 is cross-cut by numerous coarse grained pegmatite dikes and, presumably related, finer-grained, sugary-textured aplite dikes. Detailed hand sample, petrographic and geochemical analyses of all intrusive units have been performed for comparison. The granite, with biotite and little muscovite and no garnet contrasts with the muscovite + garnet-bearing and essentially biotite-free pegmatite dikes. Geochemical analyses of two aplite samples suggest that they are richer in SiO2, Na2O, and K2O but poorer in CaO relative to the host granites. These contrasts in mineralogy and in chemistry indicate that the granite formed from a melt with different chemical characteristics than the pegmatites and aplites. The entire outcrop is cross-cut by trachy-andesite dikes, which are extrusive igneous rocks.

33. Engineering Properties of Clay Gouge from Multiple Fault Localities

**Patrick R. Cabbage, Undergraduate**

*Dr. Richard Orndorff & Dr. P. Ted Doughty, Geology*

Fine-grained clay gouge is formed in the damage zone of faults; rock units adjacent to the fault are crushed by high pressure into fine-grained gouge that lubricates the fault plane. I have tested eight samples of clay gouge and four samples of potential clay gouge source beds from southwestern Wyoming, compiling grain-size distributions, plastic limits, liquid limits, plasticity indices, and specific gravities. Compositional variations between different samples resulted in a range of properties. The clay gouge tested had liquid limits ranging from 20.94%
to 33.40%. The plastic limits ranged from 13.00% to 28.70%. Plasticity indices ranged from 4.34% to 14.80%. Specific gravities ranged from 1.80 to 2.66. I have sampled fault gouge from Rosa Butte in eastern Washington and from Fourth of July Pass in northern Idaho to assess characteristics of local clay gouge and to compare properties from local fault gouge with properties of samples from Wyoming.

34. A Guide of Health Services for Foreign Students at Eastern Washington University
Heather J. Sawyer, Undergraduate
Dr. Julia Smith, Anthropology

Students who attend EWU have access to a wide variety of health services to accommodate their needs. Foreign students may not have the same ease in accessing these services. I will begin my project by researching the needs of foreign students at EWU in terms of health. To do this, I will use focus groups and interviews. I will then research the services available to meet these health needs, as well as where these services are located, how they are accessed, and any other general information that may be useful. To do this, I will interview individuals involved in these health care services. The goal of my project is to then take the needs of the students and the programs available and bridge the gap between them. From this research, I will produce a type of pamphlet that foreign students can turn to when they have a health related question or concern. It is my hope that this project will provide a valuable resource to the community of foreign students at EWU and improve their overall experience here.

35. Digital Systems Design: A RISC Processor Design Project
Matthew D. Weller, Undergraduate
Dr. Kosuke Imamura, Computer Science

The reduced instruction set computer processor (RISC) design is widely used on today’s computers. I designed and implemented a RISC processor, using a hardware description programming language (HDL) and a digital development circuit board with a programmable logic chip. This project demonstrates that HDL enables a computer science student with little electrical engineering background to develop a complex digital design. The design and implementation of complex digital circuits have always been left to the electrical engineering student. Now, with the change in technology and the development process of digital circuits, the computer science student is capable of designing and implementing complex digital design. The working design shows that a computer science student does not need to be an electrical engineer to design and implement complex digital circuit.