23rd annual Linfield College
Student Symposium
A Celebration of Scholarship and Creative Achievement
23rd Annual Linfield College
Student Symposium

A Celebration of Scholarship and Creative Achievement
May 15, 2015

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Acknowledgments

Academic Affairs would like to thank the following people for their hard work in producing this year’s Symposium: Heather Belt, J. Christopher Gaiser, Anna Keesey, Mallie Kozy, Brenda DeVore Marshall, Andy Lockhart, Bahram Refaei, Amy Scholer, Barbara Seidman, Kathleen Spring, Faun Tiedge, and Brian Winkenweder.
Schedule At-A-Glance

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STUDENTS STAND BY ODD-NUMBERED POSTERS AND TABLE-TOP DEMONSTRATIONS
The Avenue Nicholson Library

STUDENT MONOLOGUES
Austin Reading Room Nicholson Library

STUDENTS STAND BY EVEN-NUMBERED POSTERS AND TABLE-TOP DEMONSTRATIONS
The Avenue Nicholson Library

DEBATE DEMONSTRATION
Ford Hall

ENGLISH DEPARTMENT HONORS STUDENT PRESENTATIONS
Austin Reading Room Nicholson Library

MUSIC DEPARTMENT STUDENT PERFORMANCES
Delkin Hall Bull Music Center

ART AND VISUAL CULTURE DEPARTMENT HONORS AND THESIS STUDENT SHOW
Linfield Gallery Nils Lou Gallery Miller Fine Arts Center

POSTERS AND TABLE-TOP DEMONSTRATIONS AVAILABLE FOR VIEWING
The Avenue Nicholson Library

Quiet please during events in the Austin Reading Room.
Refreshments will be available in the Nicholson Library throughout the day.
Presentations by Department

ANTHROPOLOGY

Performing Gender: A Study of Gender Fluidity
Nicholas J.K.M.K. Coney | Faculty Sponsor – Hillary Crane

Female Expressions of Beauty in West Africa
Kathleen Greaver | Faculty Sponsor – Thomas Love

ART & VISUAL CULTURE

Sewn: Handmade Book
Taryn K. Takara | Faculty Sponsor – Liz Obert

Portfolio Students
Heidie Ambrose
Lindsey Dahl
Davonte McLin
Kristin Miller
Jack Nunn
Jana Purington
Doug Sundman
Caleb Taylor

Thesis Students
Ivan Colin
Kelsey Garrett
Maya Luque
Lionel Parra
Taryn Takara

BIOCHEMISTRY

Developing an Analytical Method for Separating and Quantifying RNA Generated in in vitro Transcription Reactions
Henry Wienkers | Faculty Sponsor – Megan Bestwick

The Effect of Rapamycin on Mitochondrial Electron Transport Chain Activity
Lauren Madison DeVore | Faculty Sponsor – Megan Bestwick

BIOLOGY

Validation of a Requirement for Regena/NOT-2 in miRNA Mediated Gene Silencing
Rhese D. Thompson | Faculty Sponsor – Catherine Reinke

Are the Requirements for microRNA-Mediated Gene Silencing Uniform Across Different Cell Types and Developmental Time Points?
Tika Zbornik | Faculty Sponsor – Catherine Reinke

Identifying a new gene required for microRNA-mediated gene silencing in Drosophila melanogaster
Michael W. Morin, Sean Bowden | Faculty Sponsor – Catherine Reinke

Response of the Sponge Microbiome to Nutrient Additions
Mariah H. Denhart | Faculty Sponsor – Jeremy Weisz

A Molecular Probe Finds Evidence of NIX Pathogen in Pacific Razor Clams (Siliqua patula) in Oregon
Mitchell VandenBerg, Andrew Carlston | Faculty Sponsor – Jeremy Weisz

Students with an exhibit number of 1-82 can be found in the Grand Avenue of Nicholson Library.
Odd-numbered presenters will be present from 9:30-10:45 a.m. Even-numbered presenters will be present from 12:15-1:30 p.m.
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| Metal Ion Detection Using Silica Sol-gels Containing Silver Nanoparticles and Calcein Blue (CB) | 48   |
| Evan R. Carlson | Faculty Sponsor – Elizabeth J.O. Atkinson |

**COMMUNICATION ARTS/RHETORIC**

Voicing their Experiences: The Narrative Analysis of Rape Stories by College Women | 14   |
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| Dropping the Bass: Electronic Dance Music Festivals as a Forum for Community and Cultural Identity Development | 37   |
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| Politics: A World for Men and Women: A Feminist Critique of the Role of the First Lady in the United States | 69   |
| Sarah Weiser | Faculty Sponsor – Brenda DeVore Marshall |
| Debate Demonstration | Ford Hall Lobby | 12:15 - 1 p.m. |
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Integrated Computer Vision System for Semi-Autonomous Robots | 1    |
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| Logan Tyler Munson, Taylor Charles Klopp | Faculty Sponsor – Jeff Summers |

Students with an exhibit number of 1-82 can be found in the Grand Avenue of Nicholson Library. Odd-numbered presenters will be present from 9:30-10:45 a.m. Even-numbered presenters will be present from 12:15-1:30 p.m.
An Hedonic Pricing Model for the Portland and Seattle Metro Area Housing Markets
Seth D. Fults, Mike F. Nardoni | Faculty Sponsor – Jeff Summers

The Effect of Government Agricultural Support Payments on Farmland Rental Prices
Jarvis Zosel-Offutt, James Lange | Faculty Sponsor – Jeff Summers

Does ESPN’s Total Quarterback Rating Help Explain an NFL Team’s Probability of Winning?
Shuai Pei, Andrew Waetzig | Faculty Sponsor – Jeff Summers

EDUCATION
“Estoy Aquí Para Servirles”: Pre-Service Teachers Reflect on Advocacy and Service for English Language Learners (ELLs) through a Semester Study Abroad
Mackenzie Smith, Vesta Namiranian, Morgan Seymour | Faculty Sponsor – Kena Avila

ENGLISH
Honors Student Presentations | Austin Reading Room | 2 - 5:15 p.m.
2 p.m. | Sigma Tau Delta Honor Society Inauguration and Presentation of Senior Honor Cords
2:15 p.m. | “White Sands” (fiction and poetry)
Shaterah Hall | Faculty Sponsors – Lex Runciman & Anna Keesey

2:45 p.m. | “Going Wild: An Eco-Critical Evaluation of Krakauer, McCandless, and Penn"
Dawn Wyruchowski | Faculty Sponsors – David Sumner & Barbara Seidman

3:15 p.m | “Jane Eyre’s Masculinity Crisis”
Samantha Hilton | Faculty Sponsors – Daniel Pollack-Felzner & Reshmi Dutt-Ballerstadt

3:45 p.m. | “Creative Gestures in a Reasonable Space” (fiction)
Madelyne Wong | Faculty Sponsor – Anna Keesey

4:15 p.m. | “Witches, Bitches and the Patriarchy: Gender and Power in the Harry Potter Series”
Delaney Bullinger | Faculty Sponsors – Katherine Kernberger & Barbara Seidman

4:45 p.m. | “Begin Anywhere” (poetry)
Marit Berning | Faculty Sponsor – Lex Runciman

ENVIRONMENTAL STUDIES
Soil Nitrogen and Carbon in Urban and Rural Forests
Wes L. Hanson, Robin H. Fahy | Faculty Sponsor – Nancy Broshot

Tree Composition and Seedling Recruitment in Urban and Rural Forests
Robin H. Fahy, Wes L. Hanson | Faculty Sponsor – Nancy Broshot

HEALTH, HUMAN PERFORMANCE & ATHLETICS
Test-Retest Reliability and Validity of the Plank Exercise
Gia Saporito, Gretchen Jernstedt, Holden Miller | Faculty Sponsor – Sarah Coste

Kinematic Differences between Land and Shallow-water Sprinting
Laurel Huth, Ellie Schmidt | Faculty Sponsor – Garry Killgore

HISTORY
James Connolly’s Years in America, 1902-1910
Sydney M. Owen | Faculty Sponsor – Peter Buckingham

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Beyond the Vines—The Second Generation: A Preliminary Look at Family Relationships and Gender in the Oregon Wine Industry  
Julian Adoff  |  Faculty Sponsor – Sharon Bailey Glasco

MASS COMMUNICATION

Behind the Door  
Rhianna M. Bennett  |  Faculty Sponsors – Michael Huntsberger & Susan Sivek

The Historic and Contemporary Roles of Noncommercial Public Service Media Across Local, Regional, National and Transnational Cultures  
Kelsey R.H. Tanouye  |  Faculty Sponsor – Michael Huntsberger

MATHEMATICS

Searching For a Lost Plane  
Yichen You, Yu Yan  |  Faculty Sponsor – Jennifer Nordstorm

Asymptotic Behavior of Traveling Wave Solutions to Reaction-Diffusion Equations  
Malley M. Nason  |  Faculty Sponsor – Stephen Bricher

1-Relaxed Edge-Sum Labeling Game  
Hang Do, Timothy Singer, Brent Moran  |  Faculty Sponsors – Chuck Dunn & Jennifer Nordstrom

MODERN LANGUAGES

How to Change a Culture: Residential Tourism, Postmodernism, and Radical Transformation on the Iberian Peninsula  
Joel Trousdale  |  Faculty Sponsor – Peter Richardson

L’Oregon: A Look at French Members of the Oregon Wine Industry  
Sherilyn J. Harrington  |  Faculty Sponsor – Peter Richardson

Ethnic Korean Education in Japan  
Cody Purchase  |  Faculty Sponsor – Peter Richardson

Alexandra David-Neel: A Pioneer of Buddhism in France  
Lauren Orr  |  Faculty Sponsor – Peter Richardson

Yōkai in Japanese Popular Culture Today  
Lauren M. Inaba  |  Faculty Sponsor – Masayuki Itomitsu

MUSIC

Music in Islamic Reform  
Amanda L. Pierce  |  Faculty Sponsor – Joan Paddock

Music Performances  |  Delkin Hall  |  1 - 2 p.m.

Not Elevator Music by Christian Santangelo  
Christian Santangelo, percussion

Ландыш / The Lily of the Valley, Op. 38 no. 2 by Anton Arensky  
Jaimie McDonald, soprano
Anna Vanderschaegen, cello
Susan McDaniel, piano

“Sláin go foil” (Irish poem) by Christopher “Cody” Meadows
Cody Meadows

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L’oiselet by Frederic Chopin, arranged by Pauline Viardot
Delaney Bullinger, soprano
Susan McDaniel, piano

Clair de Lune by Claude Debussy
Ian Cox, piano

Waiting for Angels by Logan Mays
Logan Mays, baritone and piano

“Pulled” from The Addams Family by Andrew Lippa
Cassandra Pangelinan, mezzo soprano
Susan McDaniel, piano

The Imperfect Few, choreography by Caitlyn Evans
Caitlin Evans & Emily Eisert, dancers
Cody Meadows, percussion
“Human,” music by Aquilo

Quartet for the End of Time by Olivier Messiaen
“III. Abîme des oiseaux” and “V. Louange à l’Éternité de Jésus”
Anna Vanderschaegen, cello
Quillan Bourassa, clarinet
Albert Kim, piano

Noll Collection of Musical Instruments
Kelsey Garrett | Faculty Sponsor – Joan Paddock

NURSING

Blood Sample Rejection Rates in the Emergency Department
Zoe B. Arends-Derning, Tammie Cresto, Halsie Peek, Lemlem Temelso | Faculty Sponsor – Sue Butell

Nurse Burnout in the Emergency Department
Blake Hammond, Kaylan Rude, Julianna Ellings, Breanne Parries | Faculty Sponsor – Marla Spadafora

Length of Stay for Laparoscopic Cholecystectomy
Kathryn Cartwright, Alexis Sayer, Alysha Phan | Faculty Sponsor – Jana Taylor

Inpatient Oral Care
Olivia N. Fragoso, Sophie Butigan, Jessica Newton, Chaleah Waters | Faculty Sponsor – Ingrid Flanders

PHILOSOPHY

Inhibited Synthesis and Erotic Transgression: Georges Bataille in Three Movements
Robin H. Fahy | Faculty Sponsor – Kaarina Beam

PHYSICS

The Use of Piezoelectric Actuators in an Energy-Efficient Noise Reduction System
Ian J.M. Johnson | Faculty Sponsors – Joelle Murray & Bill Mackie

Capacitance Measurements of Defects in Solar Cells: Checking the Model Assumptions
Justin R. Davis, Thaddeus Cox | Faculty Sponsor – Jennifer Heath

Measuring Charge Carrier Mobility of Graphene
Christina A. Bibler
Faculty Sponsor – Michael Crosser

Does a Simple Lattice Protein Exhibit Self-Organized Criticality?
Alissa A. Runyon, Dana M. Gibbon, Arun Bajracharya | Faculty Sponsor – Joelle Murray

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Comparison of Raised and Flat-Seam Baseballs
Joseph S. Carroll  |  Faculty Sponsor – Joelle Murray

Measuring Strain in Trusses
Spencer Metzsch  |  Faculty Sponsor – Tianbao Xie

Constructing and Testing a Hydrokinetic Generator
Matthew Daniel Carleson  |  Faculty Sponsor – Joelle Murray

**POLITICAL SCIENCE**

What William F. Buckley, Jr. Did Not Understand about James Baldwin: On Baldwin’s Politics of Freedom
Maggie Hawkins  |  Faculty Sponsor – Nicholas Buccola

The Mine Ban Convention: A Justified Success or Just Another Naked Emperor?
Whitney Z. Brittingham  |  Faculty Sponsor – Nicholas Buccola

**PSYCHOLOGY**

Adolescent Stress Enhances Morphine Conditioned Place Preference in Rats
Haylie Watson, Sarah Becker, Kendra Dahl, Kayla Dewolf, Chloe Shields  |  Faculty Sponsor – Lee Bakner

What Do You Think about Ink?
Alison Lee Filipski, Patricia Roberts, Kin Leong Chan
Faculty Sponsors – Tanya Tompkins, Megan Kozak Williams, & Kay Livesay

The Effects of Domain Specific Working Memory on Our Ability to Perceive Color
Taryn K. Takara  |  Faculty Sponsor – Kay Livesay

Exposure to Sexualized Images of Athletes Negatively Affects Adolescent Male Athletes’ Appraisals of Self and Others
Ashli A. Johnsen  |  Faculty Sponsors – Jennifer Linder & Elizabeth Daniels (University of Colorado, Colorado Springs)

How Might Different Cultural Worldviews Affect Collaborative Inhibition
Kin Leong Chan  |  Faculty Sponsor – Kay Livesay, Tanya Tompkins & Megan Kozak Williams

**SOCIOLGY**

An Oral History of San Martín de Porres Catholic Mission
Flora V. Maciel Garibay, Miriam Corona, Gina R. Castillo  |  Faculty Sponsor – Jeff D. Peterson

The Transformation of Tibetan Identity
Mang Jia  |  Faculty Sponsor – Thomas Love

“The Game” as Structure: Exploring Gendered Identities, Interactions and Macrostructures in the System of Sex Trafficking
Katelyn Henson  |  Faculty Sponsor – Amy Orr

**THEATRE ARTS**

* A Midsummer Night’s Dream
  Costume Design
  Rhianna M. Bennett  |  Faculty Sponsors – Laurel Peterson & Brenda DeVore Marshall

  Costume Design for *A Midsummer Night’s Dream*
  Mariko Kajita  |  Faculty Sponsor – Laurel Peterson

  Scenic Design for *A Small Family Business*
  Kelsey Garrett  |  Faculty Sponsor – Tyrone Marshall

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A Midsummer Night’s Dream in Technicolor
Emily Meinel  |  Faculty Sponsor – Laurel Peterson

Neighborhood 3: Requisition of Doom Videography
Michael Cooney  |  Faculty Sponsors – Tyrone Marshall & Janet Gupton

Designing a Costume for Neighborhood 3: Requisition of Doom
Kensie Sempert  |  Faculty Sponsors – Laurel Peterson & Brenda DeVore Marshall

Unrealized Costume Designs for A Midsummer Night’s Dream
Kensie Sempert  |  Faculty Sponsors – Laurel Peterson & Brenda DeVore Marshall

Monologues  |  Austin Reading Room  |  11 a.m. - 12 p.m.
11 a.m.  |  Performance of Opening Monologue from Richard III by William Shakespeare
Nicholas C. Granato  |  Faculty Sponsor – Janet Gupton

11:15 a.m.  |  Performance of Constance’s Speech from King John (Act III, Scene IV) by William Shakespeare
Lise Grimelund-Kjelsen  |  Faculty Sponsor – Janet Gupton

11:30 a.m.  |  Monologue from King Henry VI, Part 2 (Act II, Scene IV) by William Shakespeare
Mariko Kajita  |  Faculty Sponsor – Janet Gupton

11:45 a.m.  |  Performance of Queen Margaret’s Speech from King Henry VI, Part 3 by William Shakespeare
Emily Meinel  |  Faculty Sponsor – Janet Gupton

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Project Descriptions

1
Integrated Computer Vision System for Semi-Autonomous Robots
Graham E. Romero
COMPUTER SCIENCE
In this project I explored the creation of a computer vision system. I successfully implemented basic region-based tracking using both a small Raspberry Pi-powered robot and my computer, which wirelessly communicate. The robot sends its camera data stream to the computer, and the computer performs the tracking and sends movement instructions back to the robot. The primary goal of creating this type of computer vision system was successfully met, and future goals include adding GPS and digital-compass sensors to allow positional and orientation tracking of the robot, so the data may be plotted. Additionally, another goal is to implement (via post-processing) scene reconstruction based on the data gathered.

2
Sewn: Handmade Book
Taryn K. Takara
ART & VISUAL CULTURE
Handmade book, written by Taryn Takara, and created using Adobe Illustrator, Photoshop and InDesign

3
A Midsummer Night’s Dream Costume Design
Rhianna M. Bennett
THEATRE ARTS
This presentation is of my final design for the Costume Design course offered by the Theatre Arts department. There are six colored renderings as well as a binder and descriptions of the work.

4
Costume Design for A Midsummer Night’s Dream
Mariko Kajita
THEATRE ARTS
For a class project in costume design, I created designs for A Midsummer Night’s Dream by William Shakespeare. My inspiration came from both Greek and Elizabethan styles. Actors during Shakespeare’s day wore their own Elizabethan clothes on stage. The actors also incorporated some costume pieces and accessories to indicate the time period and locale of ancient Greece. I wanted to bring the fashions Shakespeare used to the current stage.

Since mysticism was popular in ancient Greece, I tied the fairies to Greek fashion. One of the fun aspects in this play is the lack of distinction between reality and the dream world. I connected the nobles to both time periods, but more to Elizabethan fashion to express their refined social status. The mechanicals’ costumes were in-between these two styles because they associate with both the nobles and the fairies. I love history and was inspired by how the actors of Shakespeare’s time melded Elizabethan fashion with Athenian accessories. This concept is similar to what you might see in a dream. Two things that don’t usually go together can look perfectly acceptable in a dream world. The goal of my costume design was to present a new combination of historical fashion.

The line and shape of Athenian garments brought up pictures of elegant yet free flowing fairies, which further cemented my desire to mix Elizabethan and Athenian fashions. The hair accessories the Athenians sometimes wore gave me a place to express my creative design. I incorporated plants, flowers and other nature-based objects to give distinctions to my fairies.
For the Athenian nobles, I picked heavier, more Elizabethan-like fabrics to portray their social status and wealth. I chose more structured silhouettes to represent the strict social protocol they were required to follow in their life. I was impressed by how the fashion of Elizabethan nobles had detailed styles and patterns. There were many details to incorporate with the Greek fashion, which I enjoyed thoroughly. For example, a high collar was popular in men’s fashion during the Elizabethan time period. I used it to represent the Athenians’ confining world, where people are not allowed to marry for love.

I differentiated the mechanicals by using leather materials. They each have one or two leather pieces, such as vests, belts, and/or sandals. Under these accent pieces, they wear a Greek tunic with flowing Elizabethan sleeves. Their clothes are thin, faded, and worn out because they are lower class laborers. Compared to the nobles, the mechanicals are less restrained. They do have principles and laws to follow, but they have an ability to be creative within their social class due to lower expectations. Since the mechanicals are less confined than the nobles, I used the looser Athenian garments to tie the mechanicals to the fairies.

5

Scenic Design for *A Small Family Business*

*Kelsey Garrett*

**THEATRE ARTS**

*A Small Family Business* is a dark farce by contemporary British playwright Alan Ayckbourn. Set during the height of Margaret Thatcher’s ministry in the 1980s, the play focuses on a straight-laced man’s struggle to keep his family and his business in line. Hijinks quickly ensue as the situation spirals out of control and the characters are sent scrambling to contain it. In typical farce fashion, much of the comedy is driven by the characters’ interactions in and around the set. For this particular play, this involves a two-story suburban house with segmented rooms that serve as several different locales. In order to accomplish Ayckbourn’s specific stage directions, I designed a naturalistic, wall-to-wall set in proscenium. Each room is defined with distinct colors and patterns to divide the space and drive the comedy. The overall aesthetic emphasizes the decorating style of the eighties as well as providing a whimsical backdrop to Ayckbourn’s circus of events.

The realized design may be viewed in the Marshall Theatre in Ford Hall throughout the day.

6

*A Midsummer Night’s Dream* in Technicolor

*Emily Meinel*

**THEATRE ARTS**

In Costume Design with Laurel Peterson, I designed costumes for *A Midsummer Night’s Dream*. I chose to base my design around the concept of “Dreams in Technicolor” set in 1960s Great Britain. I chose dreams/magic as Technicolor because the magic in *A Midsummer Night’s Dream* stems from heightened emotions and situations, much as color was over-saturated in the ’60s. I used bright colors and complex patterns to indicate spells, fairies and dreams. I was also able to assign each grouping with a British subculture that fit into their social standing in the play: Nobility: Mod, Mechanicals: RudeBoy/Hard Mod, Fairies: Hippies.

7

*Neighborhood 3: Requisition of Doom* Videography

*Michael Cooney*

**THEATRE ARTS**

Jennifer Haley’s *Neighborhood 3: Requisition of Doom* is a play about blurring the lines between reality and virtual reality. It poses the question: at what point does the reality we create become more real than the real world? This was the focus adopted by the director, Janet Gupton, for Linfield College’s production. As the Multimedia Designer and Engineer, I was given the task of creating the videography, which was projected on the set using two projectors, one facing the front of the house and one that would rear project onto the windows of the house. The goals of the videos
were to help establish a dark and jarring mood, drive the story forward, and connect the scenes. The largest parts of the videography were the Walkthroughs and Scene Nine.

The Walkthroughs were a series of eight videos that gave the audience hints about how to play the game the characters in the show are playing, as well as tying the scenes together. To create the design, I used several techniques. The first was splitting the walkthrough lines between three actors. I then blended each actor with a different element, helping establish the characters as video game characters. Finally, I incorporated various video editing techniques such as voice alterations, quick little cuts, repeating small portions of the video several times to give the effect of a stutter, and frame shifts.

The design of Scene Nine was to help blur the line between reality and virtual reality. I filmed the entirety of the scene and had it projected at the same time the actors were performing it on stage. It was shot from a low angle so when projected onto the second-floor windows of the house, it appears to be occurring in the physical world. Finally, this video allowed us to show the murder of another character in a graphic manner.

Designing a Costume for *Neighborhood 3: Requisition of Doom*

Kensie Sempert

Theatre Arts

Laurel Peterson, Linfield College’s resident costume designer and shop manager, and I were tasked with a very unique project last fall: creating a costume for Mariko Kajita’s character in Jennifer Haley’s play *Neighborhood 3: Requisition of Doom*. It was special because Kajita’s role was that of the leader of a group of artificial intelligence-esque characters, or “walkthroughs,” who lead the audience through the dynamics of both the play and the game within the play. The idea was for them to have an ominous, powerful, and somewhat menacing quality to them, and Kajita was to be the epitome of that mood, while also emphasizing both her femininity and Japanese features (because she is a Japanese actress).

In addition to the specific demands for her character, this project was unique because we were under time restrictions. Because her character appears mostly on screen during the play, video production had to take place early on in the rehearsal process, meaning her costume, hair, and makeup designs had to be completed within approximately a week and a half. Because of this, we started small. I began my research of artificial intelligence (A.I.), druid, Japanese, and other fantasy characters, compiling features that could come together into a costume that would make Kajita look mysterious, alluring, and fiercely badass.

We decided to build a custom, cropped bolero-esque jacket, which we would pair with more typical garments (a black camisole, leggings, and boots). This was my first experience draping and patterning from scratch, and Laurel guided me through each step, allowing me to execute them myself—from taping my style lines onto a dress form, to slashing and spreading paper along the form to create the wide, up-standing collar, to finalizing pattern pieces, cutting them out, and sewing them together. Some of the most difficult parts of this process were making decisions: which fabric to purchase (wool and pleather)? How thick to make the trim (two inches)? How to create closures (make fake ones with hooks and eyes)?

In addition to the costume, I was tasked to develop ideas for Kajita’s hair and makeup. I began with the makeup, thinking of lines, shapes, and colors that might emulate those of the druids or A.I.s I had researched, or enhance her Japanese look. I decided upon an ombre mask-effect over her eyes, creating a sharp line of black just above her eyebrows that extends from her hairline at her temple into the inner corner of her eyebrow. This pans down into a lighter blue, creating a visual dichotomy of the harsh black line and the misty, mysteriously fading blue. I copied this look in her lip makeup, penning her upper lip in black and the blue ombre in a strip down her bottom lip and chin, to suggest the other-worldly nature of her role. My choices for her hair were chiefly based off of revealing the harsh line of her eye-makeup on her forehead (so we curled her bangs to sit higher on her face) and to bring out the intensity of the wide, up-standing collar (by pulling her hair back).
These decisions appeared successful for our first run of the show. After having our production accepted to perform at KC-ACTF this year, however, we were given an extra budget to further develop Kajita’s costume (and make her ever more badass). Accordingly, I matured the other pieces of her costume by designing a bodice to replace the camisole, choosing patterned pleather leggings to replace the plain jersey ones, and selecting a pair of high-heeled, detailed pleather boots to add height, femininity, and authority to her character. I chose to keep the entire costume black, and reused the pleather from the jacket, but also incorporated an embossed, diamond pattern pleather into the bodice, to give it more texture and intrigue.

The only thing I built among the costume additions was the bodice, for which I got to use some of the skills I had acquired building corsets for Linfield’s production of The Importance of Being Earnest, as well as what I learned from draping and patterning the cropped jacket. In the end, this opportunity to design a character’s entire look (costume, hair, and makeup) taught me an array of new costuming skills, from design choices, to problem solving, to construction, as well as the processes for each of these. Without Laurel’s help, I would have had immense trouble navigating myself through the steps it takes to create a costume, especially something so fitted and customized. Her guidance was invaluable, and her generosity in sharing this opportunity with me has been an experience of a (collegiate) lifetime.

Unrealized Costume Designs for A Midsummer Night’s Dream
Kensie Sempert
THEATRE ARTS

The setting is Upper Manhattan and Lower Manhattan (Greenwich Village, specifically) in the early twentieth century. The mortal characters are urban socialites of Uptown—high class city dwellers without a care in the world or a blemish on their appearance—but when Egeus enforces the patriarchal oppression that women of this time are trying so hard to exterminate, Hermia (Egeus’ daughter) chooses to flee his authority. She and her lover, Lysander, retreat to Lower Manhattan, an area contrary to the refined and sophisticated atmosphere of Uptown, and the home of the bohemians (the fairies). Between the exotic culture of the Village, the rallying lower-class workers who practice theatre to subvert notions of their inability to appreciate art, and the naïve recklessness (or perhaps adventurousness) of the young lovers, this interpretation seeks to draw out social commentary on the interrelationships between urban socialites, bohemian artists, and working class people during the early twentieth century.

The issues of identity and love within Midsummer were important to me and led me toward a concept that would emphasize what I interpret the characters’ identities are. For example, the lovers are simply the lovers—we do not know them by any interest, trade, or identifier other than who they love. Accordingly, they become metropolitan socialites with nothing to do other than indulge. This also gives Theseus, a duke in the play, the room to be a government official of sorts for the state of New York.

Along these lines, the fairies are the ones who control the romantic escapades of the play, so I chose to interpret them as a progressive, liberal, and bohemian kind of people. I referenced art nouveau artistic styles of the time, as well as symbolism in Egyptian jewelry to incorporate a worldly, exotic, and eclectic vibe for their appearance. The Greenwich Village setting also makes them a strong contrast to the mortals.

Finally, I interpret the mechanicals as laborers in New York at a time where social justice for workers was becoming more important. I imagine immigrant and impoverished workers who have families living in tenements, fighting for unions and better working conditions in an increasingly industrialized world—and amid this adversity, they come together to perform a play, showing that although they are unskilled, uneducated, and/or lower class, they at least have an interest in culture. They are not solely identified by their work, but also by their pursuit of art.

I think this concept will not only emphasize the characterization of each character and group of characters, but it also highlights the interrelationships between individuals and groups. The contrast between the mortals (socialites), fairies (gypsies), and mechanicals (laborers) is not only a prominent topic for early twentieth-century New York, but also for today, and even in Shakespeare’s time.
Performing Gender: A Study of Gender Fluidity
Nicholas J.K.M.K. Coney

ANTHROPOLOGY

The subjective quality of identity and the relativistic nature of gender are subjects that continue to bemuse and attract social scientists. In this study I examine gender fluidity – an inconsistent gender identity – within the framework of Western ontology. By analyzing narratives, I note that my informants recognize this gender identity as fluctuating feelings (which I call the feelings of gender) that influence how they perceive and interact with their bodies. Furthermore, I examine other important elements that may have influenced my informants’ understanding of their gender identities and bodies: upbringing, previous relationships and interactions, communities, and language.

Developing an Analytical Method for Separating and Quantifying RNA Generated in In Vitro Transcription Reactions
Henry Wienkers

BIOCHEMISTRY

The generation of run-off transcripts from in vitro transcription reactions is a useful technique in the study of transcription regulation. There are currently limited ways in which these run-off transcripts can be analyzed, and few that are truly quantitative. Our aim is to establish a method using ion-pair reverse phase high performance liquid chromatography (IP RP HPLC) to analyze RNA transcripts from in vitro transcription reactions. We were able to demonstrate that we could recapitulate the separation of DNA based on size using our IP RP HPLC method. The application of this method was also able to effectively separate RNA based on size in the size range of 281 – 1908 bp. Using a simple in vitro transcription system with T7 RNA polymerase and a linear DNA template with a single promoter, we showed detection of the RNA run-off transcript in the size range demonstrated. We would like to apply this method to more complex in vitro transcription systems and demonstrate the ability to quantify RNA using IP RP HPLC.

Validation of a Requirement for Regena/NOT-2 in miRNA Mediated Gene Silencing
Rhese D. Thompson

BIOLOGY

miRNAs are small non-coding RNAs that silence gene expression. A forward genetic screen led to the discovery of a mutant with defective gene silencing that contains a mutation in the gene Regena/NOT2. We hypothesize that the defect in silencing is a result of the mutation in Regena/NOT2 rather than another mutation inadvertently generated in the genetic screen. To formally test this hypothesis, we must either perform a genetic rescue, by adding a functional copy of the Regena/NOT2 gene into the mutant fly and observing restoration of silencing or recreating the mutant phenotype by generating an independent mutation in Regena/NOT2 and observing the silencing defect as seen in the original mutant flies. We opted to generate an independent mutation in Regena/NOT2 and assay silencing with a GFP-based reporter of silencing. To do this, we generated flies that contained the new mutation in Regena/NOT2, the reporter of silencing, and the ability to compare silencing in adjacent cells with or without the new mutation in Regena/NOT2. We hypothesize that the independent line of flies containing the new mutation in Regena/NOT2 will show the same defect in silencing as our original mutants.

Voicing their Experiences: The Narrative Analysis of Rape Stories by College Women
Brenda T. Martinez

COMMUNICATION ARTS/RHETORIC

The relevance of the topic of sexual assault on college and university campuses for today’s college generation has been discussed widely in the media, particularly in coverage since the summer of 2014. With the media spotlight on this issue, it has become clear that there are obvious issues with outdated campus policies that often act as barriers
to victims coming forward and reporting their assaults. This analysis examined the narratives of three college women who were victims of sexual assault. They included two opinion editorial letters by victims published by their school’s newspapers and the first chapter of Alice Sebold’s memoir, Lucky. These stories detail the realities victims face and have helped pave the path for other victims. Using narrative criticism as a frame, this essay examines the rape myths that surround men and women and the ways in which rape is acknowledged and not acknowledged on college campuses.

The paper upon which this poster was based was written for the Senior Seminar course in Communication Arts.

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Are the Requirements for microRNA-Mediated Gene Silencing Uniform Across Different Cell Types and Developmental Time Points?

Tika Zbornik

BIOLOGY

We aim to experimentally determine which genes are essential in microRNA mediated gene silencing using Drosophila melanogaster. MicroRNAs are small, noncoding RNA molecules that silence genes, but all of the genes necessary for miRNAs to function have not been identified. A forward genetics screen was performed using a reporter system with green fluorescent protein and an eye specific enhancer. The reporter is known to be regulated by miRNAs, so flies with defects in silencing can be identified by increased GFP fluorescence. Subsequent experiments have focused on identifying the mutations generated in the screen, and categorizing the role of the corresponding genes in silencing. However, this screen only identified mutations that cause defects in silencing in adult eye tissue. Our lab is frequently asked whether silencing has the same requirements in different tissues and at a different developmental time point. To address this question, we generated a new approach to view silencing. We utilized a reporter that expresses GFP ubiquitously, and we looked at larvae at an early developmental time point. Larvae that have two copies of the mutation are not viable, so we used a genetic trick called mitotic recombination to generate clones in the larval tissue. Heat shock was utilized to induce the mitotic recombination. One caveat with this new system is that wild type and mutant tissue could not be unambiguously identified. To clarify the cell type, a line of flies was created with red fluorescent protein to mark the wild type tissue. The pattern of fluorescence indicating that silencing was disrupted was visible, but it is likely that RFP fluorescence was bleeding through into the GFP channel on the microscope, confusing the results. To address this, a line of flies is being created that have no GFP. If fluorescence is present in the GFP channel, our hypothesis will be supported and the settings on the microscope will be adjusted to prevent this. Based on the data we collect, we will optimize the microscope settings or use a laser scanning confocal microscope to obtain clearer images without any interference.

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Interdisciplinary Research-Based Learning in Organic Chemistry and Microbiology Laboratories: Synthesis and Biological Testing of Novel Penicillin Derivatives

Kyle R. Rehberger

CHEMISTRY

Interests in the mechanism that penicillin bestows on its target protein has driven the curiosity of its binding specificity towards the methicillin resistant strain of Staphylococcus aureus, and its expression of a unique penicillin binding protein that has enabled its resistance. The ability of bacteria to gain antibiotic resistance has strengthened the ongoing need to synthesize and discover novel drugs to combat the diseases that follow infection. If it were not for the collaborations between scientific disciplines, the production of effective novel drugs such as penicillin would not be the same. To encourage undergraduate students to make real world connections across disciplines, the development of an interdisciplinary organic chemistry-microbiology laboratory experiment was developed. By utilizing discovery-based, authentic research to intentionally encourage student collaboration and improve retention of knowledge gained, a pedagogical experiment involving students from both organic chemistry and microbiology was designed to meet these goals. To implement this
educational experiment into existing curriculum, an original experiment was designed and tested in the fall of 2014 to develop a synthetic experimental procedure and biological assay that could be used by organic chemistry and microbiology students in the following spring. The synthetic experimental portion had to be completed within a three-hour laboratory period, yet provide enough versatility for each set of students to synthesize different penicillin compounds by varying the acyl tails attached to the penicillin head group. Once the penicillin compounds were synthesized, the organic chemistry students prepared brief presentations to explain the chemistry behind their syntheses to the microbiology students, who aided in their biological testing, allowing students to visualize the antimicrobial efficacy of their antibiotic on bacterial strains.

Microbiology students collaborated in the biological analysis by teaching the chemistry students how to perform a disc diffusion assay and interpret possible susceptibility that the antibiotics may have had on gram-negative and gram-positive bacterial strains. This experiment illustrated the benefits of performing open-ended research to create new possible antibiotics in a chemistry course and of testing the synthesized products in a biology course to visualize the antimicrobial efficacy of their antibiotic on bacterial strains. Overall, this experiment gave students in each course the chance to teach and share their newly learned expertise with their peers, to make scientific connections across disciplines and to address an authentic, open-ended research problem through cooperative learning.

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Identifying a new gene required for microRNA-mediated gene silencing in
Drosophila melanogaster
Michael W. Morin, Sean Bowden
Biology
Mature microRNAs (miRNA) are ~22 nucleotide long single-stranded ribonucleic acids essential for gene silencing. Silencing occurs when miRNAs are processed via endonucleolytic cleavage and subsequently associate with the miRNA-induced silencing complex (miRISC). miRISC binds via complementary base pairing to target mRNAs, and target mRNAs are silenced by either mRNA degradation, translational block, or both. Knowledge of all genes required for silencing is incomplete.

We aim to determine the molecular mechanism of silencing by identifying and characterizing genes required for silencing. A forward genetic screen was performed using EMS mutagenesis of Drosophila melanogaster to generate mutant lines with disrupted gene silencing as visualized by a GFP-based fluorescent reporter of silencing. Locations of EMS-induced mutations are being mapped by determination of recombination frequencies between these mutations and molecularly defined P-element insertions. Preliminary recombination mapping reveals that our mutation of interest (I1-5) is found within a discrete region of the genome on chromosome 3R. A new fly line has also been generated to assist with this preliminary recombination mapping. Future deficiency mapping and complementation tests combining the mutation and alleles of candidate genes will reveal the location of our mutation, and lead us to identify a gene required for micro-RNA mediated gene silencing.

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Factors Affecting Retention of Transfer Students at Linfield College
Levi A. Altringer, Michael Zier
Economics
Building on the work of Tyler (2011), this paper analyzes the factors that affect the decision by transfer students at Linfield College to return for a second year. Data was obtained for transfer students from the Department of Institutional Research at Linfield College from 2009 to 2013. We estimate the logit probabilities of retention likelihood as a function of academic ability, net price, curricular engagement, extra-curricular engagement, choice of major and demographic characteristics. We find that academic ability, curricular engagement, institutional commitment, and choice of major variables may be significant factors in the retention of transfer students at Linfield College. The estimated effects and the resulting conclusions must be interpreted cautiously due to our small sample size. However, a discussion of the results shows that Linfield may be able to improve retention of transfer students through increased curricular engagement and greater departmental awareness.
Test-Retest Reliability and Validity of the Plank Exercise

_Gia Saporito, Gretchen Jernstedt, Holden Miller_

**HEALTH, HUMAN PERFORMANCE & ATHLETICS**

**Purpose:** The plank exercise is a popular and widely used exercise to increase core strength. We previously established normative values for the plank exercise that may be used for fitness classification to identify gaps in core muscular strength and endurance. Whether the plank exercise can be confidently added to current fitness appraisal protocols will depend on its reliability and validity in the fitness testing environment. This study sought to examine test-retest reliability of the plank exercise and to compare plank performance with established normative values for the curl up test. The role of verbal encouragement cues during plank performance testing was also assessed.

**Methods:** Collegiate male (n=14) and female participants (n=19) performed the plank exercise in two separate sessions separated by a minimum of 72 hr. Participants maintained the plank position until complete fatigue was reached. Verbal cues were given to half of the participants in one of the two sessions. Performance on the curl up exercise was measured in a third, separate session.

**Results:** Intraclass correlation showed that mean time held in the plank position was not significantly different between the two plank testing sessions (108.15 + 49.38 versus 111.39 + 56.87 seconds, p=0.556). Verbal encouragement cues did not improve performance time (between group effect, p=0.940). The curl up test was not significantly correlated with either plank session (r=0.410 and 0.276 for plank session one and two, respectively). Surprisingly, the curl up test was positively correlated with participant height (r=0.578).

**Conclusion:** This study suggests that the plank exercise is a reliable test; plank performance was comparable across testing sessions and not influenced by verbal encouragement. Further testing is needed to confirm validity of the plank exercise as a measure of core muscular endurance. We show here that plank performance was not correlated with the standard curl up test. However, the curl up test may not adequately measure core strength, given that increased body height was associated with higher curl up completion scores.

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**James Connolly’s Years in America, 1902-1910**

_Sydney M. Owen_

**HISTORY**

James Connolly, born in Edinburgh, Scotland in 1868, was an Irish socialist who would go on to be a leading member of the 1916 Easter Rebellion in Ireland. From an early age he became involved in the socialist movement through groups such as the Scottish Socialist Federation and the Independent Labor Party. A self-educated man well read in the socialist and political literature of his day, Connolly eventually made his way back to Ireland, forming his own socialist group, the Irish Socialist Republican Party. In 1902 he embarked on a speaking tour in the United States at the invite of Daniel De Leon’s Socialist Labor Party. Upon return to Ireland, troubles arose within his party, resulting in his expulsion and subsequent return to America, where he would live from 1903 to 1910. Connolly’s years in America had a profound impact on his political and socialist ideology, providing him with real world experience navigating leadership politics, and refining his grassroots labor organization and strike methods. He wrote and traveled extensively with the SLP, IWW, and SP, thus gaining valuable experience he would bring back to Ireland and employ for the causes of the Irish worker, and of Irish national independence. He had arrived in America as a socialist speaker and writer from a minor party, but then returned to Ireland as a veteran strike leader and labor organizer, with revolutionary aims for Ireland and a far more defined understanding of his own socialist ideology.
Music in Islamic Reform

_Amanda L. Pierce_

_In this thesis presentation about the debate over music in Islam, I talk about how musicians are using music, not only to express their opinion in this debate, but also as a tool for reform and change in the religion as a whole._

How to Change a Culture: Residential Tourism, Postmodernism, and Radical Transformation on the Iberian Peninsula

_Joel Trousdale_

_In this study, I looked into the cultural effects of the newly termed “residential tourism” on the Spanish coast, specifically looking into the Costa Blanca. In it, I argue that as a result of globalization and post-modernism, the coast of Spain has transformed Spanish culture into a highly commoditized object, radically transforming the coast from close-knit fishing communities to towns with barely any resemblance to the fishing villages they were, full of Northern Europeans and their cultural customs, but maintaining just enough of the “exotic” appeal that the Spanish Mediterranean offers them. Through this process, I argue that the culture transforms from one that is largely collectivistic in nature to one much more individualistic and commoditized. Furthermore, I argue that this process is one of gentrification, in which lower class and traditional fishers of the villages are pushed out by northern Europeans and fellow Spaniards with more money as the property values rise._

What William F. Buckley, Jr. Did Not Understand about James Baldwin: On Baldwin’s Politics of Freedom

_Maggie Hawkins_

_In this essay, we explore James Baldwin’s understanding of freedom through an examination of his famous debate with the conservative polemicist William F. Buckley, Jr. at the Cambridge Union in 1965. During the course of the debate, Buckley attempts to show that Baldwin was a wild-eyed extremist who was bent on overturning “American civilization.” Buckley saw Baldwin as a threat, to borrow the language of the National Review “Mission Statement,” to the “tradition of fixed postulates having to do with the meaning of existence, with the relationship of the state to the individual, of the individual to his neighbor, so clearly enunciated in the enabling documents of our Republic.” In sum, it is fair to say that Buckley thought Baldwin was an “enemy of freedom.” We argue that Buckley was right to perceive Baldwin as a threat to his worldview, but that he fundamentally misunderstood the nature of Baldwin’s critique. In order to make this case, we challenge Buckley’s portrayal of Baldwin as an ideological extremist and we compare what Buckley and Baldwin had in mind when they talked about freedom. Our aim, in other words, is not to offer a comprehensive comparative analysis of Buckley and Baldwin, but rather to use Buckley’s misunderstanding of Baldwin as the basis for an exploration of how Baldwin challenged – and attempted to transform – how we think about freedom._

The Use of Piezoelectric Actuators in an Energy-Efficient Noise Reduction System

_Ian J.M. Johnson_

_In this essay, we explore James Baldwin’s understanding of freedom through an examination of his famous debate with the conservative polemicist William F. Buckley, Jr. at the Cambridge Union in 1965. During the course of the debate, Buckley attempts to show that Baldwin was a wild-eyed extremist who was bent on overturning “American civilization.” Buckley saw Baldwin as a threat, to borrow the language of the National Review “Mission Statement,” to the “tradition of fixed postulates having to do with the meaning of existence, with the relationship of the state to the individual, of the individual to his neighbor, so clearly enunciated in the enabling documents of our Republic.” In sum, it is fair to say that Buckley thought Baldwin was an “enemy of freedom.” We argue that Buckley was right to perceive Baldwin as a threat to his worldview, but that he fundamentally misunderstood the nature of Baldwin’s critique. In order to make this case, we challenge Buckley’s portrayal of Baldwin as an ideological extremist and we compare what Buckley and Baldwin had in mind when they talked about freedom. Our aim, in other words, is not to offer a comprehensive comparative analysis of Buckley and Baldwin, but rather to use Buckley’s misunderstanding of Baldwin as the basis for an exploration of how Baldwin challenged – and attempted to transform – how we think about freedom._

The piezoelectric effect allows for conversion between mechanical stress and electrical impulses. By utilizing this phenomenon, a novel method of sound attenuation was explored and tested in which a piezoelectric plate absorbs part of an incoming sound wave. Reversing the process allows a second plate to produce a phase-inverted wave using the absorbed energy, achieving further reduction through destructive interference.
Beyond Moneyball

Logan Tyler Munson, Taylor Charles Klopp

ECONOMICS

This study provides an updated test of Billy Beane’s Moneyball hypothesis using a panel model over the years 1999-2013. We regressed winning percentage as a function of the original Moneyball variables, which included on-base percentage, slugging percentage, on-base percentage against and slugging percentage against. In turn we created our own model which replaced the “against” statistics with earned run average and fielding percentage. Within both models, we concluded that the coefficient of on-base percentage was significantly greater than slugging percentage, which supports Beane’s theory that in today’s game on-base percentage is more important than slugging in determining winning percentage. We extend this analysis using both models to test for the effects of the 2005 steroid ban and found that neither of the coefficients for on-base percentage or slugging percentage were significantly affected by the ban. These conclusions can be used by major league managers and owners to decide which players to trade for or to pick up in free agency.

The Mine Ban Convention: A Justified Success or Just Another Naked Emperor?

Whitney Z. Brittingham

POLITICAL SCIENCE

The Mine Ban Convention (MBC) has been heralded as one of the most effective treaties in the post-Cold War era due to an unprecedented rate of compliance: 162 out of 190 states have ratified the treaty and 84% of members have destroyed 90% of stockpiled Anti-personnel (AP) landmines worldwide. However, a case study of the treaty to ban AP landmines demonstrates that measuring effectiveness through compliance may have dangerously distorted our perceptions of treaty success. In the case of the MBC, equating compliance with effectiveness has caused scholars to overlook unintended consequences of the treaty, including environmental damage and the economic burden of landmine removal. Furthermore, this approach turns the treaty into a government initiative that places more emphasis on state participation than realistic humanitarian outreach. This study proposes that achieving humanitarian goals in the MBC and similar treaties ultimately depends on emphasizing the resolution of problems shared by the entire global community over threats to individual states, which can be accomplished by re-examining problems through the lens of common security.

Capacitance Measurements of Defects in Solar Cells: Checking the Model Assumptions

Justin R. Davis, Thaddeus Cox

PHYSICS

Capacitance measurements of solar cells are able to detect minute changes in charge in the material. For that reason, capacitance is used in many methods to electrically characterize defects in the solar cell. Standard interpretations of capacitance rely on many assumptions, which, if wrong can skew the results. We explore possible alternate explanations for capacitance transitions, which may not be linked directly to defects, such as a non-ideal back contact, and series resistance.

Adolescent Stress Enhances Morphine Conditioned Place Preference in Rats

Haylie Watson, Sarah Becker, Kendra Dahl, Kayla Dewolf, Chloe Shields

PSYCHOLOGY

Past research using rat models suggests that uncontrollable stress experienced as an adult enhances morphine’s rewarding properties using place conditioning techniques (Will, Watkins & Maier, 1997; Der-Avakian et al., 2007). Recent work using a new peripubertal stress paradigm indicates that exposure to fear inducing stressors, synthetic fox odor (TMT) and an elevated platform (EP), during postnatal days 28 through 42 (P28-P42) increases aggression in
adulthood (Marquez et al., 2013). Few studies have explored whether adolescent stress enhances morphine-induced conditioned place preference (CPP), and the present work adapts a new stress paradigm to explore modulation of opiate reward.

Adolescent Sprague-Dawley rats (n=12) arrived P25 and the stress phase commenced P28. Half of the animals remained in the homecage (No Stress, NS). The remaining animals received two stressors (Stress, S), exposure to fox urine (TMT) and an elevated platform (EP). The S treatment continued 7 days starting P28 (EP only), P29 (EP, TMT), P30 (TMT, EP), P31 (TMT only), P33 (EP only), P34 (EP, TMT) and P35 (EP only). TMT exposure occurred in a cage containing a small cloth saturated with 10 mls of TMT for 25 mins. EP exposure occurred by placing each animal on a 12x12 cm platform atop a 95 cm tall column for 25 mins. Two days after the stress phase, all rats received morphine place conditioning. Subjects received a 15-minute preference test (Pre-test) to determine the initially nonpreferred side of the apparatus followed by 8 conditioning days. On alternating days, each animal received either morphine (15 mg/kg, IP) in the initially nonpreferred side of the apparatus or saline solution (1 ml/kg, IP) in the non-drug paired side of the apparatus for 15 minutes. After the last day of conditioning, a place preference test (Post-test) was conducted identical to the pre-test. Time on the nonpreferred side of the apparatus served as the primary dependent measure.

A 2 (S v. NS) X 2 (Pre- v. Post-test) mixed ANOVA revealed significant main effects of stress (F(1,10)=6.854, p=.026) and test (F(1,10)=49.47, p=.000). A statistically significant interaction showed a unique effect of stress during post-test indicating that adolescent stress increases morphine CPP (F(1,10)=6.981, p=.025). Similar to uncontrollable stress as an adult, adolescent stress enhances the rewarding properties of opiates.

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An Oral History of San Martín de Porres Catholic Mission

*Flora V. Maciel Garibay, Miriam Corona, Gina R. Castillo*

**SOCILOGY**

The purpose of this research project was to document the history of San Martín de Porres Catholic Mission. San Martín de Porres is a unique mission; it is the only one in the Pacific Northwest to offer all of their services solely in Spanish.

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An Hedonic Pricing Model for the Portland and Seattle Metro Area Housing Markets

*Seth D. Fults, Mike F. Nardoni*

**ECONOMICS**

This study applies an hedonic pricing model to the housing markets in the Portland and Seattle Metropolitan areas. The 206 houses in the sample were randomly selected for a two-week period during the months of October 2014 and March 2015. We find that for both markets the final sale price for houses is positively affected by the number of bathrooms, number of bedrooms, size of the lot, and an assigned metric that gives a quality score to the nearest high school. The distance of the house to the central business district negatively affects the sales prices. But, the marginal effects of the number of bathrooms and the distance to the central business district are greater in the Portland area, while the square feet of the house and the lot size have a greater marginal effect in the Seattle area.

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The Effect of Government Agricultural Support Payments on Farmland Rental Prices

*Jarvis Zosel-Offutt, James Lange*

**ECONOMICS**

The goal of this study was to explain the effect of government agricultural support payments on farmland rental prices. The regression specified farmland rental prices as a function of farm income (net of government payments received), and direct government agricultural support payments. The regression was estimated using seemingly unrelated regression for the years 2002, 2007, and 2012. Our results show the effect of government agricultural support payments on farmland rental prices was significant in 2002, then became insignificant for 2007 and 2012. We conclude the waning significance was caused by a change in the format of government support payments from a known value, activity-based payment, to a variable value, insurance payment.
Measuring Charge Carrier Mobility of Graphene

Christina A. Bibler

PHYSICS

This research reports measurements of electron mobility in liquid-gated graphene. Graphene field-effect transistor (GFET) biosensors are more sensitive to changes in external fields when the mobility is high; therefore increasing mobility will improve sensitivity. Mobility can be calculated from the ratio of sheet conductivity to carrier density. Sheet conductivity was measured using van der Pauw geometry and carrier density was determined from measurements of the liquid-gate capacitance. It is shown that mobility improves after the graphene surface is cleaned by an annealing process.

Female Expressions of Beauty in West Africa

Kathleen Greaver

ANTHROPOLOGY

Art from Africa is often imagined as sculptures and masks by a large majority of people. Current written materials on art in the area comprise of mainly those particular items with minimal emphasis on textiles. However in Western Africa, Senegal is not known for those “traditional” arts. Rather, the Senegalese are known for and place great significance on dress and outward appearance of the body. Thus, Dakar, Senegal is known as one of the fashion capitals of Africa. The Senegalese are known for their use of wax fabrics and body adornment, and they consider these commodities of great importance to display status in their society. The wax fabrics come from a long history of cloth trade between Europe and ‘exotic’ places, such as West Africa. The displays of status are demonstrated on important cultural events such as religious holidays, baptisms and weddings, just to name a few. This paper discusses the affects of globalization on the fashion of the area as well as how these external markers present identity and status to their audience.

Blood Sample Rejection Rates in the Emergency Department

Zoe B. Arends-Derning, Tammie Cresto, Halsie Peek, Lemlem Temelso

NURSING

Background: The national average for laboratory rejection of blood samples ranges from 0.3% to 0.8%. The rate of rejection at a local emergency department averaged 2.8% in 2014.

Purpose: Discover prevalent causes of laboratory blood sample rejection in the emergency department and determine best practice for maintaining acceptable rejection rates.

Methods: Analyze data from the hospital laboratory to identify reasons for blood sample rejection and which personnel procured the rejected samples. Review literature to find common sources of error and explore evidence based practices in drawing blood for laboratory testing.

Results: Data showed that hemolysis and clotting were the main reasons for blood sample rejection. Registered nurses were responsible for the largest number of rejections. Literature states best practice is to avoid using intravenous catheter starts for drawing blood samples and to use phlebotomists for lab draws rather than registered nurses.

Discussion/Recommendations: Registered nurses may have higher rejection rates because of their tendency to draw blood from intravenous catheter starts. Therefore, the first recommendation is to revise policy and educate personnel to avoid this method of obtaining blood samples. The second recommendation is to use a dedicated phlebotomist or technician for blood draws instead of registered nurses. Considering the effect of laboratory rejections on efficient care delivery, healthcare costs, and patient satisfaction, reducing the blood sample rejection rate in the emergency department should be prioritized.
Does ESPN’s Total Quarterback Rating Help Explain an NFL Team’s Probability of Winning?
Shuai Pei, Andrew Waetzig
ECONOMICS
The purpose of this study is to examine the relationship between an NFL quarterback’s Total Quarterback Rating (TQR) and his team’s prospect of winning games. We use a binary-logit model to estimate the marginal effects of TQR on the probability of winning, controlling for teams’ power rankings and home-field advantage. We find that a 5-point improvement in the TQR score would lead to a 2% increase in the probability of winning the game. Our results suggest that NFL coaches could see an increase in the probability of winning through the improvement of their quarterbacks’ performance. This model can also be used to predict the outcome of NFL games in the coming seasons.

Does a Simple Lattice Protein Exhibit Self-Organized Criticality?
Alissa A. Runyon, Dana M. Gibbon, Arun Bajracharya
PHYSICS
There are many unanswered questions when it comes to protein folding. These questions are interesting because the tertiary structure of proteins determines its functionality in living organisms. How do proteins consistently reach their final tertiary structure from the primary sequence of amino acids? What explains the complexity of tertiary structures? Our research uses a simple hydrophobic-polar lattice-bound computational model to investigate self-organized criticality as a possible mechanism for generating complexity in protein folding and protein tertiary structures.

Dropping the Bass: Electronic Dance Music Festivals as a Forum for Community and Cultural Identity Development
Ivanna Tucker
COMMUNICATION ARTS/RHETORIC
This critical essay focuses on Electronic Dance Music (EDM) Festivals with an emphasis on how attendees perceive the event as a forum for community and cultural identity development. Fantasy Theme Criticism was used as a frame to look at the overall themes and visions that are presented at the event to explore how the experience creates the attendees’ reality. The goal of this study was to see what aspects draw attendees to be a part of the EDM community and to determine the ways in which the event helps establish a collective cultural identity through music.

The paper upon which this poster was based was written for the Senior Seminar course in Communication Arts. The paper was competitively selected for presentation at the Northwest Communication Association Conference in April 2015.

Behind the Door
Rhianna M. Bennett
MASS COMMUNICATION
This submission is my senior project for Mass Communication. I chose to direct and edit a fictional short film, *Behind the Door*, written by Lindsey Hall. The film is approximately 15-20 minutes long. The cast and crew are all Linfield students, and the film features music from Logan Mays.
L’Oregon: A Look at French Members of the Oregon Wine Industry

Sherilyn J. Harrington

MODERN LANGUAGES

L’Oregon is a documentary film that takes a look at French members of the Oregon wine industry. Created in conjunction with the Oregon Wine Industry Experience program and the Modern Languages Department of Linfield College, this project consists of interviews conducted in order to learn more about the lives, opinions, goals, and experiences of these individuals. It also explores the question of what makes Oregon so attractive as a wine-producing region. What does it have in common with its frequently-mentioned counterpart, Burgundy, and what sets it apart? As representatives of a relatively new branch of the wine industry, the French show that Oregon has a solid and exciting future.

The Historic and Contemporary Roles of Noncommercial Public Service Media Across Local, Regional, National and Transnational Cultures

Kelsey R.H. Tanouye

MASS COMMUNICATION

The historic mission of public service broadcasters has been to produce and distribute news, public affairs, documentary, analysis, fine arts and other cultural content in a manner that preserves, promotes and enhances cultural expression and understanding. However, with the rise of global capitalism in recent decades, the public service approach has been challenged by profit-oriented commodity approaches to electronic media services and content. More recently, the Internet has challenged public service providers to provide new forms of content and delivery, transforming from public service broadcasters to public service media providers, while adhering to their historic missions and principles.

This documentary introduces audiences to the historic and contemporary roles of noncommercial public service media (PSM) across a variety of local, regional, national and transnational cultures. Relying primarily on the participation of public service media scholars, policy makers and practitioners of the global RIPE Initiative communicate how the principles and practices of PSM serve the cultural expression and transmission requirements of individuals, communities, nations and societies.

Video recordings of interviews with prominent international PSM researchers and professionals were conducted on August 26-29, 2014, at the RIPE@2014 conference in Tokyo, Japan, and provided the setting for the examination of the mission, methods and contexts of contemporary PSM.

"Estoy Aquí Para Servirles": Pre-Service Teachers Reflect on Advocacy and Service for English Language Learners (ELLs) through a Semester Study Abroad

Mackenzie Smith, Vesta Namiranian, Morgan Seymour

EDUCATION

The teaching of English Language Learners (ELLs) is often deeply affected by political agendas and sociocultural beliefs rather than sound pedagogical rationale. While all teaching is a political act, current legislations in the US make it clear that skillful responses are needed for ELLs. For this reason, it is essential to teach future teachers how to identify and interpret different agendas in order to respond as their students’ advocate. "Estoy Aquí Para Servirles" focuses this advocacy work as an act of service. This grant funds one student researcher who participated in a semester long study abroad program in Oaxaca, Mexico. As a result of living, studying, and volunteering in Mexico this student has deeply examined these issues. She developed an advocacy project based on readings, service, class discussion, and interviews. This grant funds summer student employment to continue an analysis of the work and experiences, and prepare presentations for dissemination.
Metal Ion Detection Using Silica Sol-gels Containing Silver Nanoparticles and Calcein Blue (CB)

Evan R. Carlson

Surface-enhanced Raman spectroscopy (SERS) is a spectroscopic technique which relies on the inelastic scattering of photons from a target molecule. SERS is both sensitive and specific; the technique produces a unique spectrum for all molecules while offering up to single molecule detection with proper conditions. However, acquisition of SERS spectra requires the presence of a suitable substrate, such as noble metal nanoparticles or roughened metal electrodes. Silica sol-gels are porous, amorphous silica matrices formed by the hydrolysis of a silicon containing precursor molecule. As a result of their unique structure, these compounds have a variety of unique properties, such as high surface area and low thermal conductivity. They can be easily modified, and metal-colloid-modified silica sol-gels represent a relatively unknown class of compounds which can function as substrates for SERS measurements. In this study, the fluorescent dye calcein blue (CB) was chosen as a target molecule due to its ability to interact with various metal ions. As a result, it has found use as an indicator in EDTA titrations and has potential applications in metal ion sensing devices. Thus, detection of calcein blue within modified sol-gels could lead to the development of new techniques for the detection of metal ions. Such techniques could have applications in fields such as water quality analysis or other environmental assays.

Comparison of Raised and Flat-Seam Baseballs

Joseph S. Carroll

The difference in seam-height between raised and flat-seam baseballs leads to different drag and spin forces when the balls are thrown by a pitcher. The goal of this experiment is to measure the difference in vertical deflection of curveball pitches, caused by the different seam-heights.

What Do You Think about Ink?

Alison Lee Filipski, Patricia Roberts, Kin Leong Chan

Using a modified IAT, we examined both implicit and explicit attitudes toward tattooed individuals. Participants demonstrated a negative implicit bias toward tattoos. Correlations between implicit and explicit measures were mixed, suggesting the benefit of assessing implicit and explicit attitudes.

The Effect of Rapamycin on Mitochondrial Electron Transport Chain Activity

Lauren Madison DeVore

Using a chronological lifespan (CLS) assay, the effects of Rapamycin (Sirolimus) were tested on different strains of Saccharomyces cerevisiae to better discover the drug effect on mitochondrial ETC activity and overall longevity. Reduced TOR (Target of Rapamycin) signaling has been shown to increase mitochondrial ETC activity and extend CLS in yeast through an increase in mitochondrial membrane potential and superoxide production. Superoxide is a reactive oxygen species in yeast cells that is converted to hydrogen peroxide by the superoxide dismutase enzymes (Sod1p in the cytosol and inner membrane space of the mitochondria, and Sod2p in the mitochondrial matrix). Here we show that the superoxide dismutase 1 gene deletion (sod1Δ) portrays an increased longevity as compared to wild type (wt) in the presence of Rapamycin. Additional studies are planned to understand these results. Furthermore, a MATLAB image processing program is under alpha-testing. This program will be used to count yeast colony slides using a simple camera picture, eliminating the need of researchers to purchase specialized instruments or spend extended amounts of time manually counting colonies.
Response of the Sponge Microbiome to Nutrient Additions

Mariah H. Denhart

Marine sponges are known to host large and diverse microbial communities, with the composition of these communities remaining fairly stable across large spatial and temporal scales. Sponges inhabiting the coast of Oregon, USA host bacteria capable of numerous nitrogen transformations, so it is hypothesized that the bacterial community would change as ambient nutrient conditions change. To test this hypothesis, we placed nutrient addition devices (NAD) at Netarts Bay, Oregon for six weeks to increase the nutrient load. We assessed bacterial abundance and diversity within individuals of *Haliclona* sp. A, the dominant sponge at the site, using scanning electron microscopy (SEM), denaturant gradient gel electrophoresis (DGGE), and microbiome analysis using illumina sequencing. We also collected ambient and exhalent water samples to assess the nutrient fluxes through the sponge. SEM results suggest that treated individuals had significant declines in their bacterial loads. DGGE and microbiome analysis confirm these decreases in bacterial load and show decreases in bacterial diversity. In addition, we found significant changes in nitrate and total nitrogen fluxes between control and NAD treated sponges, suggesting that bacterially-mediated nitrogen cycling was significantly modified by the nutrient addition. Thus, increased nutrient loads appear to detrimentally affect sponges and their associated microbial communities.

A Molecular Probe Finds Evidence of NIX Pathogen in Pacific Razor Clams (*Siliqua patula*) in Oregon

Mitchell VandenBerg, Andrew Carlston

The Pacific razor clam, *Siliqua patula*, is an important recreational fishery species that lives in the intertidal zone of sandy beaches from Alaska to central California. Populations have had periodic, but significant, declines over the past 30-40 years. These declines have correlated with an increase in the presences of an unidentified, intranuclear bacterial parasite known as Nuclear Inclusion X (NIX). NIX, which was first identified in 1986, has generally been screened using a histological approach. We developed a PCR-based screen to reduce both the time and cost of identifying infected clams. Use of this screen resulted in amplified sequences with a 97% match to the previously published 16S rDNA sequence for NIX. The sequence data supports placement of NIX into the gamma-proteobacteria, and suggests that it is related to isolates from diseased corals. Clams collected from the northern coast of Oregon showed ~50% infection rate using the PCR screen. This is the first report of NIX present in clams from Oregon, as all previous work had been in the state of Washington. Future work will identify the incidence rate and geographical spread of the NIX parasite throughout Oregon and Washington.

Ethnic Korean Education in Japan

Cody Purchase

Ethnic Koreans in Japan—called Zainichi—have a history in Japan reaching back before WWII. Ever since large numbers were brought or moved to Japan, Zainichi identities have been developing within the larger society through and due to political activism, varying degrees of ‘integration’, ethnic schooling, festivals, ethnic neighborhoods, and in many other ways. Today, these identities are extremely varied and complex yet are often spoken of almost as a homogeneous group under the term “Zainichi.” Recognition of the variety within these identities is vital to its acceptance as a demographic of Japan by Japan.
Is It Love or Is It Persuasion? A Fantasy Theme Criticism of Gender Use in Online Dating Website Commercials

Kayla Lisac
COMMUNICATION ARTS/RHETORIC

The online dating industry is rapidly growing and selling societal messages and realities to audiences through advertisements. In order to understand the growing phenomenon and the lasting impression made on viewing audiences, commercials for the websites Match, eHarmony, and OurTime were analyzed using Fantasy Theme Criticism. Gender roles and stereotypes were at the forefront of the analysis. The conclusive fantasy themes were the helpless homebody, the male savior, and the effortless male. The rhetorical vision stated that women depend on men to find their true love. The portrayed gender roles influence real world interpersonal relationships that develop from the websites. Gender is portrayed in a limited light, with the women shown in actively incompetent and inferior roles while the men are confident with many positive options made available to them. The themes are presented through stereotypical beauty depictions, settings with gender connotations, and overwhelming actions.

The paper upon which this poster was based was written for the Senior Seminar course in Communication Arts. The paper was competitively selected for presentation at the Northwest Communication Association Conference in April 2015.

The Effects of Domain Specific Working Memory on Our Ability to Perceive Color

Taryn K. Takara
PSYCHOLOGY

Baddeley and Hitch’s (1974) working memory (WM) model describes a short-term storage system which allows us to simultaneously maintain (store) and process relevant information; playing a critical role in higher order cognitive tasks such as learning, reasoning and comprehension. The WM model has three main components, the central executive—which is in charge of numerous executive functions such as planning and attentional control—and is in charge of the two subsystems: the phonological loop and visuospatial sketchpad. These different components are thought to hold on to different forms of information; the phonological loop maintains and encodes verbal/semantic and auditory information while the visuospatial sketchpad is in charge of visual information such as color, form, and movement.

While a great deal of research has focused on the storage and processing aspects of the phonological loop (Heenan, Herdman, Brown & Robert, 2014; Spurgeon, Ward & Matthews, 2014; Conrad & Hull, 1964), not much has examined the visuospatial sketchpad.

Kim, Kim and Chun (2005) used the Stroop interference task to compare the effect of overlapping verbal or spatial WM loads on either target or distractor processes of several variants of the stroop test. They found that interference increased if the type of WM load was the same as the target of the task, but decreased if WM load type overlapped with the distractor processing instead. This indicates that working memory load may impair the specific processing of information related to a secondary task. Kim et al.’s (2005) experiment presents strong empirical support for a domain-specific WM framework, but it additionally alludes to the further potential interaction between visual perception and attention within the VSSP.

There are several difficulties in studying the visuospatial sketchpad. Many items that we see can be encoded both phonologically and visually. For example, if you see an image of a tree, you encode it not only as a picture but as the word “tree.” Also, it appears that the VSSP has two representative modes. Within the visuospatial sketchpad, several studies have found evidence for a dissociation between spatial location/movement (“where”) features, and object (“what”) features such as color and form in visual WM (Tresch, Sinnamon & Seamon, 1993; Mecklinger, 1998). These show only slight overlap of shared mechanisms, showing the complexity of visual processes. Most research on the visuospatial sketchpad examines the “where” features to identify visual working memory ability. Because of this, examining the “what”/object features is the crucial next step to advance our understanding of the visuospatial sketchpad.

My study will incorporate both types of perceptual load types - both object and spatial features. By exploring the object feature - color - and it’s interaction with both verbal and spatial domains of working memory, we may further our knowledge of the complex components of working memory. I aim to explore what previous research has not yet assessed: the impact of working memory on one of the most basic perceptual features – color.
Beyond the Vines—The Second Generation: A Preliminary Look at Family Relationships and Gender in the Oregon Wine Industry

Julian Adoff

HISTORY

This project is a preliminary examination of generational dynamics and the role of gender within a selection of wine producing families in Yamhill and Marion counties. It engages both oral histories and secondary literature to highlight common threads as well as challenges that these families faced in developing both their businesses as well as their wider connections with surrounding communities and consumers. Of particular interest is how the women in these families (mothers, daughters, granddaughters) played important roles in community engagement and the marketing of wine, and how women in particular faced unique challenges within an industry perceived to be dominated by men.

Soil Nitrogen and Carbon in Urban and Rural Forests

Wes L. Hanson, Robin H. Fahy

ENVIRONMENTAL STUDIES

Previous work by Dr. Nancy Broshot has revealed high tree mortality and low recruitment (new seedlings) in an urban forest (Forest Park in Portland, Oregon). A series of lichen surveys in 2013 showed the lichen community has shifted to one dominated by lichens tolerant of and thriving on high nitrogen levels. To ascertain if nitrogenous air pollution could be a cause of low recruitment, we measured the level of nitrogen and carbon in the soil at 32 sites in Forest Park (24 permanent sites and 8 conifer recruitment sites). We also added 3 control sites in the Mount Hood National Forest above Estacada along an apparent air pollution gradient. The plant community was measured at three transects at each control site and lichen surveys were conducted. Four soil samples were collected at each site, dried at 35oC until weight remained constant and sieved to reduce to fine soil particle size. The samples will be assessed using an elemental analyzer to determine total nitrogen and total carbon.

Exposure to Sexualized Images of Athletes Negatively Affects Adolescent Male Athletes’ Appraisals of Self and Others

Ashli A. Johnsen

PSYCHOLOGY

This study used a between-subjects experimental design to examine the effects of viewing sexualized versus performance images of male athletes on male adolescent athletes perceptions of self and other. Participants (n = 83, mean age = 15.4) viewed sexualized or performance images (n = 5) of male celebrity athletes and then completed explicit and implicit measures of self-perceptions. They also judged the athletic competence and respectability of the athletes in the images. Results indicated that viewing sexualized images resulted in lower self-esteem and lower ratings of the athletic competence and respectability of the athletes in the photos compared to viewing performance images. These findings are among the first to demonstrate the negative effects of viewing sexualized images of male athletes on adolescent males.

Advocating For and Against Ballot Measure 88: A Cluster Criticism

Keyla S. Almazan Martinez

COMMUNICATION ARTS/RHETORIC

This case study focused on six letters advocating for and against Measure 88, a November 2014 Oregon ballot measure, that would have allowed individuals lacking immigration documentation to have access to an identification card limited to driving only. The letters by the advocates were published in local, regional and statewide newspapers that have a wide audience. The method utilized was cluster criticism with a focus on agon clusters. The study compared the language used by advocates on both sides of the campaign. The main purpose of this case study research was to gain a deeper insight into how messages are delivered by advocates in ballot measure campaigns intended to persuade voters.

The paper upon which this poster was based was written for the Senior Seminar course in Communication Arts.
How Changes in Plant Community Structure Affect Terrestrial Invertebrate Food Webs

*Dillon Alegre, Henry Simons, Casey Thein*

**Biology**

We investigated how change in plant community composition and vegetative structure brought about by annual grass-specific herbicide application affects terrestrial arthropod communities, with special emphasis on the potential mutualists and predators of the endangered Fender’s blue butterfly, *Plebejus icarioides fender* (Family: Lycaenidae). Larvae of this species form facultative protective mutualisms with ants, and they may be preyed upon by numerous invertebrate predators. We used pitfall trapping to compare terrestrial invertebrate community structure between control and herbicide-treated plots through time. The extent to which major changes in plant community composition affect the rest of the invertebrate community may have relevance for management decisions if the focus of the conservation effort has strong ecological interactions with greatly affected non-target species.

Alexandra David-Néel: A Pioneer of Buddhism in France

*Lauren Orr*

**Modern Languages**

The project seeks to determine why Alexandra David-Néel played such an influential role in the development of Buddhism in France. Alexandra’s scholarship and experience with Tibetan culture allowed her to be a source of authority on Buddhism and Buddhism practices. The language she utilizes to describe Tibet romanticized it adding to the shroud of mystery already surrounding the closed country. Her descriptions of Buddhist practices were simple making the religion accessible to the people of France. Her description of magical abilities some monks and lamas processed added a level of exoticism that helped pique interest as well. David-Néel’s portrayal of Tibet furthered its mysticism in France. This inspired an interest in Tibet and Buddhism in general that spurred the popularity of Buddhism in France today.

The Effects of BACE and Its Targets on Age-related Seizures in *Drosophila*

*Trey Anthony Chiu, Dana Gibbon*

**Biology**

The presence of Beta-Amyloid (Aβ) containing plaques in the brain is one of the histological hallmarks of Alzheimer’s Disease. β-secretase (BACE) is the enzyme responsible for producing this Aβ cleavage product and has also been shown to affect myelination and general neuronal activity. Observations from geriatric medicine suggest that there may be an increase in seizure activity associated with Alzheimer’s Disease. Preliminary data suggests that both over- and under-expression of BACE contributes to mechanically stimulated seizures in Drosophila. In vertebrates, seizure activity has been correlated with many factors including Neuregulin production and Na+ Pump activity. Both of these proteins have also been shown to require BACE activity for proper function. However, their roles in BACE related seizures remains unknown. Here we are following up on this preliminary study and exploring the roles of Vein (the Drosophila homolog of Neuregulin) and Numb (a negative regulator of the Notch Pathway). We have confirmed that any perturbation in dBACE (Drosophila BACE) levels causes a significant increase in age related seizures, suggesting that that BACE levels must be tightly regulated. In addition an increase of Vein levels also cause a dramatic increase in seizure amounts and duration suggesting that BACE, at least in part, is acting through this signaling pathway. Understanding which BACE related signaling pathways are responsible for age related seizure activity can lead to new treatments which will hopefully slow the progression of Alzheimer’s and other related neurodegenerative diseases.
Measuring Strain in Trusses

*Spencer Metzsch*

**Physics**

Strain is an important quantity in engineering and materials science that relates the deformation of a material to its original length as a percent. Different materials exhibit particular qualities under loading, for example the amount of strain due to a certain magnitude of force, or the amount of strain that can be borne before failure. This experiment aims to compare the relative strengths of three common truss configurations by measuring the strain in their members under loading.

Is the Observed Silencing Activity of Regena/NOT2 Dependent upon the Activity of MicroRNAs?

*Katherina Rees*

**Biology**

Our goal is to determine the cellular mechanisms that regulate microRNA (miRNA)-mediated gene silencing. MiRNAs are non-coding RNA molecules that interact with target-gene messenger RNA transcripts via complementary base pairing and silence target gene expression via interaction with the miRNA-induced silencing complex (miRISC). A forward genetic screen was carried out to identify requirements for miRNA-mediated silencing in Drosophila melanogaster. Genetic analysis revealed that the CCR4-NOT deadenylase-complex subunit Regena (NOT2) is required for miRNA-mediated silencing. The reporter system used to identify mutants with altered silencing utilized Green Fluorescent Protein (GFP) fused to the Brd gene 3’UTR, which is regulated by endogenous miRNAs. We are investigating whether Regena/NOT2’s activity in silencing is indeed dependent upon miRNA activity. Two reporter systems, one with functional miRNA binding sites in Brd 3’UTR and one with non-functional miRNA binding sites in the Brd 3’ UTR, are being used to analyze Regena’s activity in silencing the reporter transcript. If Regena/NOT2 acts via miRNAs, then the absence of Regena/NOT2 will lead to an increase in GFP expression and fluorescence when using the reporter with miRNA binding sites. However if Regena’s role in silencing is not dependent on miRNA activity, then the same increase in GFP expression and fluorescence will be observed in the absence of Regena/NOT2, even with the non-functional reporter system, which lacks miRNA binding sites. Observing no change in the reporter lacking miRNA binding sites in the absence of Regena/NOT2 will support the hypothesis that Regena/NOT2 activity is depending upon miRNA activity and Regena/NOT2 is not acting as a repressor of transcription. Further studies will aim to determine where Regena/NOT2 acts in the miRNA mediated gene silencing pathway.

Tree Composition and Seedling Recruitment in Urban and Rural Forests

*Robin H. Fahy, Wes L. Hanson*

**Environmental Studies**

In 1993, Dr. Nancy Broshot randomly located 25 permanent study sites in Forest Park in Portland, Oregon to examine the effects of urbanization on forest health. Plant community structure was examined. In 2003, Dr. Broshot reexamined the plant communities at each site and found significantly higher tree mortality and reduced recruitment (young trees) in all areas of the park. Many seedlings that had been present in 1993 were absent in 2003. In 2013, a 20-year follow up study of the tree community was conducted. Although the rate of tree mortality had dropped, recruitment of seedlings and saplings was still low. A series of lichen studies completed at each site in 2013 indicated high levels of nitrogenous air pollution at all sites in the park. In 2014, three control sites along a gradient of air quality in the Mount Hood National Forest above Estacada, Oregon were added to the study. Plant community variables were measured in the same manner as in Forest Park. We found significantly more live trees, saplings and seedlings at the control sites than at sites in Forest Park. We also found significantly fewer dead trees at control sites. Indeed, we had more seedlings at the three control sites than at all 25 of the Forest Park sites. We believe the low level of recruitment may be due to nitrogenous deposition from air pollution in Forest Park; we are waiting for results from collected soil samples to evaluate this hypothesis.
Living & Singing It Out: An Investigation of Contemporary Christian Music

Lexy Chapman

COMMUNICATION ARTS/RHETORIC

An analysis of the messages of three contemporary Christian music songs popular in the fall of 2014 was conducted using a method that integrated cluster and ideological rhetorical criticism. Working backwards from the songs to reconstruct the belief system that they express uncovered a creed that bears further exploration in both rhetorical and theological fields. This study revealed the prevalence of “Christian-ese” ideographs—words imbued with special religious meaning—in these top songs. Such terms effectively limit the audience to those within the evangelical Christian co-culture who already understand such references. Awareness of this reality is critical, both to groups making Christian music and to the individual consumers who listen to it.

The paper upon which this poster was based was written for the Senior Seminar course in Communication Arts. The paper was competitively selected for presentation at the Northwest Communication Association Conference in April 2015, where the author received the award for the Top Undergraduate Paper.

Inhibited Synthesis and Erotic Transgression: Georges Bataille in Three Movements

Robin H. Fahy

PHILOSOPHY

This presentation examines the philosophy of Georges Bataille on three fronts: Part I deals with an examination of Claude Levi-Strauss’ theory on the prohibition of incest, which links the formation of political systems of patrilineal genealogy to the economic reduction of feminine identity at the level of proprietary wealth, defining an exchange “fundamental to the movement from nature to society.” Bataille disagrees, arguing that the exchange of women is ceremonial, based in giving without expectation of return, claiming that political power is maintained through the sacrifice of wealth. Part II discusses the geopolitical implication of Levi-Strauss’ suggestion that at the opposite end of incest is extreme exogamy, using the example of the South African Apartheid as a case-study in miniature to discuss the “inhibited synthesis” of modern colonial progress in the development of a global order. I critique how the adoption of neoliberal capitalism as a progressive ideology vis-à-vis its promises of national sovereignty and economic partnership fails to recognize the historical entrenchment of political power and wealth accumulation of post-industrial Eurocentric regimes, which systematically exploit new players for their own ends. Bataille assesses this geopolitical deadlock of power by reconsidering the purpose of wealth, arguing that the purpose of wealth is not realized through the capitalist system of profit-investment-accumulation, but rather through acts of useless expenditure, which generate cultural “ecstasies” conducive to synthesis. Part III deals with the critical shift in philosophy and the problem of real access for post-Kantian epistemology, which remains caught in a state of inhibited synthesis between the real and the apparent. Bataille critiques the “failure” of Hegelian idealism to reconstruct the real in the wake of Kant, namely because Hegel still detaches matter, as a unified concept, situating it below the ends of rationality. Bataille argues that matter must be abstracted from conceptual-rational thought, re-constituting thought as matter, and thus allowing for a return of the epistemic access to the real. I argue that Bataille’s work encompasses a major framework that allows for a new kind of speculative realism, envisioning social, geopolitical, and epistemic boundaries.

Politics: A World for Men and Women: A Feminist Critique of the Role of the First Lady in the United States

Sarah Weiser

COMMUNICATION ARTS/RHETORIC

The role of the First Lady of the United States is relatively unexplored. This essay investigates the degree to which First Ladies gain an independent voice separate from their husbands by analyzing three artifacts, each from a different First Lady. The artifacts, from Michelle Obama, Betty Ford and Eleanor Roosevelt, included two speeches and one news column article. Each artifact was examined using a feminist critique. After conducting the analysis, the findings
suggested that based on these artifacts Eleanor Roosevelt and Betty Ford created an independent voice during their First Ladyship, while Michelle Obama has struggled to gain an independent voice separate from her husband, President Barack Obama.

The paper upon which this poster was based was written for the Senior Seminar course in Communication Arts.

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The Transformation of Tibetan Identity
Mang Jia
Sociology

After the Chinese invasion of Tibet in 1951, Tibetan identity began to secularize, shifting from a more traditional religious to a more explicitly political identity. The few studies that focus on the secularization of Tibetan identity, even if only secondarily, claim that it is either a compulsory product imposed by the reinforcement of modernization by the Chinese authority or a voluntary product through younger generation of ‘Tibetans’ internalization, primarily through schooling, of the Chinese colonization ideology. Either way, those scholars of Tibetan studies treat the secularization of Tibetan identity as a form of cultural assimilation or deterioration of Tibetan identity. Based on in-depth ethnographic fieldwork in a Tibetan village, as well as my own Tibetan ancestry, I argue that despite its secular nature, current Tibetan identity is better understood as a form of resistance to both direct and indirect Chinese domination than as a result of cultural assimilation and identity deterioration.

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Searching For a Lost Plane
Yichen You, Yu Yan
Mathematics

Malaysia plane MH370 disappeared en route from Kuala Lumpur to Beijing on 8, March 2014. In the recent past, there have been an increasing number of cases of planes getting involved into accidents and not being found. So far, the misery surrounding the Malaysian Airline Flight MH370 cannot be wished away as it has now been officially declared a ‘lost plane’ and may never again be found. After this incident, the war the Malaysian Airplane that was lost for at least 12 hours, after which the wreckage of the plane was found in Ukraine. Preliminary results indicated that it was brought down after being hit by a Russian-made missile, thought to have been hurled at the plane by the Russian-supported separatists in the East of the country. In the past days, another plane ramped into a river in Taipei, the capital of Taiwan, raising questions as to safety measures in place, in case a plane went missing (Phillips, 2011). Whereas the seas and the oceans are relatively large and may pose a big challenge for search teams to locate a place. There is no doubt that air transport is so far one of the best modes of communication throughout the world. With increased levels of communication and the need to carry out overseas businesses and operations, it is inevitable for countries and individuals to carry out expansion and integrate air transport as part of the growth strategy. The only challenge that remains has to do with the issue of safety in as far as air transport is concerned. Compared to other forms of transport including road, rail and sea, air transport is so far much better in terms of the rate at which accidents are recorded. However, the challenge that has been in place in the recent past has been how to ensure any recorded accidents can indeed be investigated and conclusions drawn with regard to causes. Whereas countries across the globe would have wished to make it possible to unearth the truth and get findings on planes involved in accidents, one of the greatest challenges have been the missing planes and by extension the exhibit from which such investigations can be done.

We develop a model including two steps: confirming the area and then the optimum searching in the area.

First of all, to confirm the area that the plane probably falls, we assume it falls along with a parabola ignoring wind resistance and horizontal lift. The Poisson Probability Distribution is adapted to calculate the probability distribution of the accident and the probability of direction of the airplane. We use this theory to model the situation of general types of airplanes.

The second layer is to propose the famous Bayesian statistics and mathematical model for search of lost planes. The Bayesian statistical model can indeed be used to help locate planes after they go missing. The Bayesian search theory and model can indeed be useful method from which the search for a plane can be enhanced. So far, this model has been successfully used in location of lost objects and vessels in the seas including the location of the French plane, Air France
Flight 447 and the USS Scorpion. The model is best for use in the search of planes given that it relies on probability as a methodology for computation and determining the probable area from which the plane can be found. Given the nature of the seas and the large masses of eaters in major oceans across the globe, the level of certainty in locating planes, particularly after they have lost contact would imply that search teams would have to include probability and computation based on probability if they have to be effective in their bid to search and locate airplanes.

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Nurse Burnout in the Emergency Department

Blake Hammond, Kaylan Rude, Julianna Ellings, Breanne Parries

Background: Burnout includes fatigue, apathy and/or frustration that interfere with job performance and home life (Walsh, 2013). Compassion fatigue is a combination of physical, emotional and spiritual exhaustion combined with the care of patients with significant pain and physical distress (Walsh, 2013). A study by Journal of Nursing found that 82% of ED nurses had moderate to high levels of burnout and 86% had moderate to high levels of compassion fatigue (Hooper, Craig, Janvrin, Wetsel, & Reimels, 2010). This information prompted a study to be conducted on local ED nurses.

Purpose: The question addressed was: What is the amount of burnout or compassion fatigue in Emergency Department (ED) nurses of a local hospital?

Methods: The Professional Quality of Life Survey (ProQOL) was used to measure burnout and compassion satisfaction (which in turn determines compassion fatigue) in 15 ED nurses.

Results: Our results found that the ED nurses had decreased compassion satisfaction. There is no evidence that these nurses have high amounts of burnout.

Discussion/Recommendations: This study found there was a decrease in compassion satisfaction, but not a high incidence of nurse burnout. While burnout is not seen in the study we conducted, a decrease in compassion satisfaction could lead to burnout over time. Our recommendation is to ask the ED nurses ways to decrease burnout and compassion fatigue.

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Testing the Response of a Sensor of Silencing to a Defect in Target Message Deadenylation

James D. Knox

Background: The CCR4-NOT deadenylase complex is a group of proteins that function together to control gene expression. The Drosphila homolog for NOT2, a subunit of the CCR4-NOT complex, was identified in a forward genetic screen that identified flies defective for microRNA (miRNA) mediated gene silencing. Flies lacking functional NOT2 fail to silence our GFP-based reporter of miRNA mediated gene silencing, however the specific role of NOT2 in gene silencing is unclear. We aim to determine whether deadenylase activity of the CCR4-NOT complex, which is carried out by POP2, is essential for silencing our reporter. To address this question we are generating flies that lack functional POP2 and contain our reporter of miRNA silencing activity. If we observe that POP2 mutants fail to silence the reporter of silencing, we can infer that deadenylase activity of the CCR4-NOT complex is essential for the silencing of our reporter. However, if POP2 mutants silence the reporter, we can infer that NOT2 silences the reporter in a manner independent of deadenylase.

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Length of Stay for Laparoscopic Cholecystectomy

Kathryn Cartwright, Alexis Sayer, Alysha Phan

Background: Hospitals seek to maximize efficiency in stabilizing and discharging post-operative patients. The post-operative length of stay (LOS) for laparoscopic cholecystectomy surgeries in the short stay unit of a community hospital in the Portland area varies significantly with an average LOS of 170 minutes.
Purpose: The purpose of this study was to isolate factors associated with decreased post-operative LOS for laparoscopic cholecystectomy surgeries to identify procedural changes that would help meet the goal of an average 120 minutes LOS.

Methods: EPIC charts of 41 patients who received a laparoscopic cholecystectomy since July 1st 2014 were reviewed for data on specific factors of perioperative care. A literature review was also conducted to gather information on evidence based standards of care.

Results: Data showed no differences in post-operative LOS for laparoscopic cholecystectomy patients based on gender, use of a nerve block, or pre-operative Xanax administration. Patients with the shortest LOS, under 120 minutes, received an average of three different antiemetics. Evidence based literature recommends using a combination of antiemetics during surgery to prevent post-operative nausea and vomiting (PONV).

Discussion/Recommendation: PONV is a leading factor contributing to increased length of stay. The results of this study, along with evidence-based literature, suggests that a combination of at least three antiemetics during surgery can decrease PONV and thus decrease post-operative LOS for laparoscopic cholecystectomies.

75
How Might Different Cultural Worldviews Affect Collaborative Inhibition

Kin Leong Chan

PSYCHOLOGY

To investigate how individualism and collectivism influence group collaboration and individual performance in recalling words. Hypothesis: 1) Individualistic Collaborative Group will recall less words and make less errors than Individualistic Nominal Group. 2) Collective Collaborative Group will recall more words and make more errors than Collective Collaborative Group.

76
Constructing and Testing a Hydrokinetic Generator

Matthew Carleson

PHYSICS

As Earth’s expendable resources dwindle, the need for alternative, renewable energy sources grows. Out of this need, an old favorite source is rising in popularity: small, single dwelling water turbines. Water-driven turbines first began as a means for turning mills, and eventually evolved into massive dams that can power whole regions. The benefit of smaller turbines, like micro- and pico-hydro power sizes, is that they can be used in streams, especially in remote areas, places that solar or wind energy is not feasible, or anywhere that even a small stream is accessible. This project focused on the construction of, and testing the properties of, a small pico-hydro power turbine. By controlling the water flow, a representation of the peak power output was measured, serving as a basis for determining the value of pico-power systems in regards to the world’s current energy production.

77
Kinematic Differences between Land and Shallow-water Sprinting

Laurel Huth, Ellie Schmidt

HEALTH, HUMAN PERFORMANCE & ATHLETICS

Previous studies have demonstrated the efficacy of using aquatic-based (AB) running when compared to land-based (LB) running to produce similar gains. However, most studies have primarily focused on deep-water running styles rather than shallow-water sprinting.

Purpose: To compare lower extremity running kinematics of female college athletes in an AB shallow water sprinting environment and in a LB sprinting environment.

Methods: 15 female NCAA Division III athletes completed this investigation. Each subject participated in a shallow-water sprinting familiarization session and completed both AB and LB sprinting tests. All trials were video recorded from the right sagittal view.
Results: T-test pairwise comparisons revealed significant differences between LB sprinting and AB sprinting. Stride rates (SR) (p<0.000) were 1.90Hz(± 0.11) for LB and 0.97Hz(± 0.12) for AB. Significant differences were also found in stride length (SL) (p<0.000) between LB sprinting (2.95m±0.19) and AB sprinting (0.88m±0.21). Additionally, the velocity between LB sprinting (5.58m/s ± 0.31) and AB sprinting (0.86m/s ± 0.25) were found to be significant (p<0.000) as was the calculated hip to foot relationship between LB sprinting (0.31m ±0.12) and AB sprinting (0.17 m ± 0.10) (p<0.004). However, single leg support time (SLS) and swing time (SW) did not exhibit statistically significant differences (p<0.064) between LB sprinting (SLS:23.03±4.11% of gait cycle; SW:76.97±4.11% of gait cycle) and AB sprinting (SLS:20.21±4.42% of gait cycle; 79.79±4.42% of gait cycle).

Conclusion: These data revealed that the AB sprinting style was found to have significant lower extremity kinematic differences when compared to the LB sprinting style for all of the kinematic variables that were measured with the exception of SLS and SW. The differences exhibited are due to fluid mechanics, e.g. drag, buoyancy, and hydrostatic pressure. However, the data assists with the understanding of the differences associated with sprinting in different media.

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Inpatient Oral Care

Olivia N. Fragoso, Sophie Butigan, Jessica Newton, Chaleah Waters

NURSING

Background: Oral care is proven to prevent colonization of pathogenic organisms in the oral cavity and decrease rates of ventilator-associated pneumonia (VAP). To improve patient health outcomes, one local hospital sought to implement an oral care policy founded on evidence-based research.

Purpose: The purpose of this study was to determine best practice for oral care in an intensive care unit. The study is an integral part of creating a comprehensive oral care policy and guide for purchasing hospital-wide oral care products.

Methods: Oral care policies at local facilities with intensive care units were reviewed and compared. Clinical practice guidelines and peer-reviewed studies were also utilized.

Results: Research revealed inconsistent oral care practices with regards to frequency, oral cleansing agent, and concentration of oral cleansing agent.

Discussion/Recommendation: The study was limited by the lack of evidence-based oral care practices. A multivariable research study needs to be conducted to ascertain the best practices of frequency, oral cleansing agent, and concentration of oral cleansing agent for oral care. Areas of interest include patient refusal rates, ventilated versus non-ventilated patients, and acuity of care.

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Yōkai in Japanese Popular Culture Today

Lauren M. Inaba

MODERN LANGUAGES

The uniqueness of yōkai is not only its numerous and diverse characters specifically, but also its holistic impact on Japanese popular culture. By studying yōkai’s history, I found that the meanings and categories of “yōkai” have changed according to people’s perception of the unknown and supernatural world. In addition, yōkai’s image and story evolved to accordingly cope with the unknown. Finally, I note that media has a direct influence to how people visualize and narrate yōkai. I conclude that these factors regarding yōkai’s creation and evolution affect how we recognize them in today’s pop culture.
Asymptotic Behavior of Traveling Wave Solutions to Reaction-Diffusion Equations
Malley M. Nason
MATHMATICS

We will discuss travelling wave solutions to reaction-diffusion equations of the form:

\[ u_t = u_{xx} + u^p(1 - u^q) \]

which can be used as a mathematical model for various biological phenomena, as well as to model problems in combustion theory. We identify conditions on the wave speed so that travelling wave solutions exist for the case \( p \geq 1 \) and \( q \geq 1 \). Moreover, we estimate the rate of decay of the travelling wave solutions. When \( p > 1 \) and \( q \geq 1 \), this estimate requires center manifold theory because the typical linear methods fail to work. Through the mathematical analysis of reaction diffusion equations, the results of this research create further studies and application in physical and industrial chemistry.

“The Game” as Structure: Exploring Gendered Identities, Interactions and Macrostructures in the System of Sex Trafficking
Katelyn Henson
SOCIOLOGY

Human trafficking, or trafficking in persons (TIP), is a crime where people profit from the exploitation of others through some form of labor (Polaris, 2015). In the U.S., the three most common forms of TIP are sex trafficking, domestic trafficking and agricultural trafficking (Human Rights Center, 2007). This study specifically focuses on the system of domestic sex trafficking and uses gender theory to explain its perpetuation. In order to explore how individuals’ gendered identities affect sex trafficking, and to explore how these identities affect the perpetuation of this crime, four survivors of sex trafficking and one law enforcement official were interviewed. Based on the interviews, it is evident that gendered identities and individuals’ gendered interactions greatly affect the internalities of sex trafficking. Gender as a multi-leveled structure that affects human behavior was evident in all narratives, which ultimately shed light on how this industry is perpetuated. Additionally, all of the participants reported having been affected by the power structures created by masculine identities in sex trafficking, which indicates that hegemonic masculinity is at play with regards to this industry. These masculine power structures fit well within the multi-leveled gender model, and they show how this model within sex trafficking is controlled by masculine identities. The narratives also provided insight into other unexpected phenomena within sex trafficking that are affected by gender, such as evidence of hegemonic masculinity within the anti-trafficking movement, and how traffickers employ capitalist ideals within this system to control women.

1-Relaxed Edge-Sum Labeling Game
Hang Do, Timothy Singer, Brent Moran
MATHMATICS

We introduce a new graph labeling and derive a game on graphs called the 1-relaxed modular edge-sum labeling game. Given a graph \( G \) and a natural number \( n \), we define a labeling by assigning to each edge a number from \( \{1, \ldots, n\} \) and assign a corresponding label for each vertex \( u \) by the sum of the labels of the edges incident to \( u \), computing this sum modulo \( n \). Similar to the chromatic number, we define \( L(G) \) for a graph \( G \) as the smallest \( n \) such that \( G \) has a proper labeling. We provide bounds for \( L(G) \) for various classes of graphs. Motivated by competitive graph coloring, we define a game on using modular edge-sum labeling and determine the chromatic game number for various classes of graphs. We will emphasize some characteristics that distinguish this labeling from traditional vertex coloring.
Performance of Opening Monologue from Shakespeare’s Richard III

Nicholas C. Granato
THEATRE ARTS

I will be performing the opening monologue from William Shakespeare’s Richard III. Richard III is the mastermind behind a plot to murder his entire family, which is in fact the royal family, and take the throne for himself. The first thing that anyone notices about Richard is that he is horribly disfigured, with one leg and one arm too short and a hump on his back. These deformities have cost him the love and respect of those around him and sets him in the background of a world that he feels he deserves to control. The play opens with Richard coming on stage to inform the audience that the great war has ended and everyone is rejoicing and celebrating. However, due to his disfigurement, he can find no pleasure in any of this. He then lays out his plan to betray his family and take the throne of England as his own.

Performance of Constance’s Speech from Shakespeare’s King John (Act III, Scene IV)

Lise Grimelund-Kjelsen
THEATRE ARTS

I will give a monologue performance from Act III, Scene IV of the play King John by William Shakespeare.

I am playing Constance. She recently found out that her son has been captured and he will most likely die. This is her reaction when it is suggested that she might have become crazy.

Monologue from Shakespeare’s King Henry VI, Part 2 (Act II, Scene IV)

Mariko Kajita
THEATRE ARTS

I will be performing Eleanor’s monologue from King Henry VI Part 2, Act II, Scene IV, by William Shakespeare.

Eleanor is the wife of Duke Humphrey of Gloucester and she wishes to be Queen of England. Humphrey is temporarily ruling England since the son of Henry VI is too young to run the government. Eleanor wants Humphrey to become King himself some day. She then learns a spell/a curse from witches and tries to make that really happen. After getting caught, she is punished to parade through the street dressed in a white sheet, barefoot, and papers pinned to her back on which her crimes are written for all to read. It is such a shame for her to walk down the street because she used to have a ride, and the crowds who are surrounding and humiliating her used to be people under Eleanor’s command. Humphrey arrives to watch Eleanor being punished and never tries to help her out. She then is permitted to speak with him briefly.

Performance of Queen Margaret’s Speech from Shakespeare’s King Henry VI, Part 3

Emily Meinel
THEATRE ARTS

In Henry VI, Part 3, King Henry has named Duke York his heir, despite having a legitimate son by his wife Queen Margaret, to avoid a revolution. Queen Margaret, disgusted by his lack of power, has declared war on York to ensure her son’s rise to the throne. During the battle, Queen Margaret captures York and taunts him for his kingly aspirations.
A British Parliamentary Debate Demonstration by the Linfield College Forensics Team

Debaters: Ellie Forness, Christopher Hu, Lacie McElvain, Jack Patterson, Cody Putman, Megan Schwab, Caleb Snodgrass, Michael Zier

Communication Arts/Rhetoric

College and university students throughout the world engage in British Parliamentary (BP) debate, an academic format with origins in British parliamentary procedure. Each debate involves four two-person teams. Two teams (“proposition” or “government”) support the resolution (the topic) and two teams (“opposition”) oppose. BP debate is about using good speaking skills to present logical arguments, and teams are encouraged to incorporate philosophical arguments into the debate. The first six speeches in the round (i.e. a single debate) feature a mix of constructive arguments (new arguments for one’s side) and rebuttal arguments (refutation of the arguments presented by one’s opponents). A BP debate round concludes with two “whip” speeches, where each side summarizes the significant arguments presented throughout the round and presents reasons why their team should win the debate. (Description adapted from materials prepared by Jackson B. Miller.)

The demonstration debate will feature a current events topic, which is common in British Parliamentary debate intercollegiate competition.

Noll Collection of Musical Instruments, displayed in Delkin Hall

Kelsey Garrett

Music

Joan Paddock received a Student-Faculty Collaborative Research grant dedicated to creating a permanent display for a collection of Asian instruments in the Vivian Bull Music Center. This collection was donated to Linfield’s Department of Music over eight years ago by Paul and Bernice Noll. Due to insufficient space, the instruments were previously kept unseen in storage. With this grant, the instruments are now exhibited to the public and able to be used as educational tools.

Music Department Performances

Performers: Quillan Bourassa, Delaney Bullinger, Ian Cox, Emily Eisert, Caitlin Evans, Logan Mays, Jaimie McDonald, Christopher “Cody” Meadows, Cassandra Pangelinan, Christian Santangelo, Anna Vanderschaegen

The 2015 Annual Student Symposium Recital features students from the Department of Music nominated by the music faculty to recognize excellence in scholarship and creative achievement. The performance includes selections from senior capstones in music (senior recitals, projects, lecture-recitals, theses), original music compositions, music performed for competitions, original dance choreography, and faculty-student collaborative chamber music works.

“White Sands” (fiction and poetry)

Shaterah Hall

Creative Writing

Readings from a collection of original short fiction and poetry, ranging from the realistic to the fantastic, loosely inspired by the desert landscape of White Sands, New Mexico, and the question of place in imaginative writing.
“Going Wild: An Eco-Critical Evaluation of Krakauer, McCandless, and Penn”  
*Dawn Wyruchowski*  
LITERATURE  
Presentation of a critical essay using interdisciplinary tools to explore and compare *Into the Wild*, Jon Krakauer’s non-fiction account of the life of wilderness adventurer and naïf Christopher McCandless, and screenwriter/director Sean Penn’s film based on the book.

“Jane Eyre’s Masculinity Crisis”  
*Samantha Hilton*  
LITERATURE  
Presentation of a critical essay using feminist and queer theory to expand upon past study of Brontë’s novel as a feminist text and query Victorian norms for masculinity.

“Creative Gestures in a Reasonable Space” (fiction)  
*Madelyne Wong*  
CREATIVE WRITING  
Readings from an original absurdist novella (fiction) concerning the working life of September Toll, a reserved designer at a futurist tech firm, where bizarre incidents and an over-enthusiastic team leader seem to doom the entire enterprise to failure.

“Witches, Bitches and the Patriarchy: Gender and Power in the *Harry Potter* Series”  
*Delaney Bullinger*  
LITERATURE  
Presentation of a critical essay analyzing Rowling’s female characters as representatives of various social spheres in the novels’ invented world.

“Begin Anywhere” (poetry)  
*Marit Berning*  
CREATIVE WRITING  
Readings from collection of original poetry exploring the uses and limitations of language in establishing coherent perceptions and a stable sense of self.
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