

StARS



Student Arts & Research Symposium

April 10 & 11, 2014

UNIVERSITY OF
ILLINOIS
SPRINGFIELD

LEADERSHIP
lived

Student Photo Acknowledgements



COVER

Beasts of the Southern Wild
Chris Costello,* Department of Communication

The waters of Lake Mary Jane are stained black due to the dense amounts of vegetation lining its banks. The creeping roots and wispy moss of this ancient Oak tree contribute to the darkening of the lake, much like that of tea leaves in hot water. Lake Mary Jane, located in rural Orlando, Florida, is connected to another nearby lake by a long narrow canal. This canal passes through an area known as Moss Park, where hundreds of these massive trees blanket the area in shade. This canal quickly becomes a dark, suffocating tunnel with the opaque waters below and the looming branches above. The knobby knees of the Cypress trees can be seen protruding out of the water, creating perfect hiding places for the local wildlife, including alligators. I shot this photo while on a boat passing through the canal.

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North by Northwest
Chris Costello,* Department of Communication

All along the shores of Lake Mary Jane there are tall, ancient trees -- scattered, and standing alone -- almost as if they are keeping guard over the water. This particular tree caught my attention due to the dense moss hanging off of its branches and its knobby knees poking out of the surface. I was attracted to the dark rich tones of the roots and the chaos created by the entangled moss. Not pictured is the large mass of lily pads I had to wad through to get this shot, and somewhere within the reeds shown in the background lives a fairly sizable alligator that let out a "bark" after I released the shutter. Needless to say, I left with just the one shot.

BACK COVER (MIRROR IMAGE)

Beasts of the Southern Wild
Chris Costello,* Department of Communication



ARTS HEADER

Tough Love
Barbie Sutheard* and Shane Harris (Mentor), Department of Art, Music, & Theatre

This rabbit belongs to a series that was highly personal as it was therapeutic to me in the times I was recovering from domestic violence. They were a way of bringing the emotional content that I had buried deep inside to the surface. As I sculpted each emotion to reality, these sculptures helped me let go of the traumas I had faced. These whimsy, animalistic forms somehow started to not only take shape of what I was feeling but it was absorbing the feeling altogether.

NATURAL SCIENCES HEADER

Chrysalis
Barbie Sutheard* and Shane Harris (Mentor), Department of Art, Music, & Theatre

The chrysalis is what a butterfly uses to protect itself while developing from its original caterpillar form. The need for security really coincides with how we as humans also deal with changes in our lives. Using the chrysalis, as a base idea for form was the catalyst to this work; however, I intend for the viewer to focus on what the work does not illustrate and that is what would have evolved from these forms.

PAGE 28 & INSIDE BACK COVER

Ghost Girl
Barbie Sutheard* and Shane Harris (Mentor), Department of Art, Music, & Theatre

The ghost-like appearance of the girl holding brightly colored green foliage seems to fuel itself with themes of the after-life. Rendered translucent, the girl represents the spirit or the soul after the body has passed. Coincidentally, the plant that is in her hands often reminds one of life here on earth. The notion of the after-life is a mystery and this particular image reveals a hope that there is something else in store for us.

To view or listen to the webcasts of the sessions go to
<http://go.uis.edu/StARS>
 where the links are on the detailed schedule.





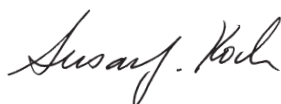
I am delighted to offer the Chancellor's support and endorsement of this 2014 *Student Arts and Research Symposium*. This important event, featuring a broad variety of creative and research endeavors of both undergraduate and graduate students, epitomizes the mission of our university to provide an intellectually rich, collaborative and intimate learning environment for our students.

I well remember the first opportunity I had as an undergraduate to present my own research. It was a challenging and thrilling experience and one that encouraged me to continue my academic endeavors and aspirations. Like the UIS students presenting at the Symposium, I was mentored by a wonderful faculty member who provided the example and advice that I needed to develop my ideas, conduct my project and plan my presentation. I sincerely thank the many faculty members who have provided the mentorship that lies behind each student's presentation. Each of those UIS faculty members affirms our collective commitment to high standards of scholarly excellence.

Congratulations to all of our StARS Symposium student-presenters! With your presentation, each of you contributes in a positive way not only to your own educational experience, but also to the intellectual environment of our campus. I hope you will take a few moments today to thank the faculty members who have mentored you and prepared you for this day's achievement.

I sincerely appreciate the contributions of all faculty, staff and students who have worked so hard to provide this wonderful opportunity.

With all best wishes,



Susan Koch, Chancellor
University of Illinois Springfield

It is my pleasure to welcome you to the 2014 Student Arts & Research Symposium at the University of Illinois Springfield. The Symposium celebrates the active scholarly inquiry and creative endeavors of some of our most talented students, who have been working under the skilled mentorship of our outstanding faculty. It represents an exciting opportunity for them to share their work with a broader community, and I am delighted that you are with us to share in the intellectual engagement and excitement of their discoveries. Your presence and interest in our students' work is essential to the success of the Symposium, for presenting one's scholarship to others, explaining the procedures and outcomes, and answering the questions that inevitably arise are all an important part of the scholarly process itself.



Faculty-student collaboration is at the heart of the educational experience at UIS and, as you will see from the student presentations, it is a powerful partnership for learning and development. The students who are presenting their work have been learning not just by listening and reading but by doing as well. They've been applying what they learn to new endeavors -- grappling with real-world problems, testing new ideas, discovering new knowledge, developing new approaches and insights, and finding new and innovative ways to creatively enrich our experiences of self, other, and the world. Presentations have been invited from all academic disciplines – the arts and humanities, life sciences, physical sciences, social and behavioral sciences, and professional programs. Different forms of scholarship will be represented, including oral readings and presentations, art exhibits, and musical performances, as well as research posters and presentations. I think you will find much of interest.

Speaking on behalf of the faculty and staff of UIS, we are very proud of our student presenters. We congratulate them on their scholarly achievements and on having been selected to share their scholarship in a professional forum and public venue.

I also want to extend my sincere appreciation to the UIS faculty members whose dedication to excellence in teaching, scholarship, and service is so apparent in the number and quality of presentations included in the Symposium, and in the Symposium event as a whole. I commend them for creating a dynamic atmosphere of scholarly inquiry and exchange that inspires, guides, and nurtures students toward greater levels of achievement.

I am especially grateful to members of the Undergraduate Research Steering Committee & the Student Arts & Research Symposium Committee. The Symposium simply would not have been possible without their leadership, commitment, and hard work.

Best wishes to all for an intellectually engaging and enriching 2014 Symposium experience!

A handwritten signature in black ink that reads "Lynn Pardie". The script is fluid and cursive.

Lynn Pardie
Vice Chancellor for Academic Affairs & Provost



Keynote Speaker Dorothy Allison

Dorothy Allison received mainstream recognition with her novel *Bastard Out of Carolina* (1992), a finalist for the 1992 National Book Award. The novel won the Ferro Grumley prize, an ALA Award for Lesbian and Gay Writing, and also became a bestseller and award-winning movie. Her short story collection, *Trash* (1988), won two Lambda Literary Awards and the American Library Association Prize for Lesbian and Gay Writing. *Cavedweller* (1998) became a national bestseller, NY Times Notable book of the year, finalist for the Lillian Smith prize, and an ALA prize winner. Adapted for the stage by Kate Moira Ryan, the play was directed by Michael Greif, and featured music by *Hedwig* composer, Steven Trask. In 2003, Lisa Cholodenko directed a movie version featuring Kyra Sedwick. The expanded edition of *Trash* (2002) included the prize winning short story, "Compassion" selected for both Best American Short Stories 2003 and Best New Stories from the South 2003.



Keynote Speaker Peter Kareiva, Ph.D.

Peter Kareiva is the Chief Scientist and a Vice President for The Nature Conservancy. He is a recognized leader in the conservation community. Prior to taking on his leadership role with The Nature Conservancy, he was Director of the Division of Conservation Biology at NOAA. He has received a Guggenheim Fellowship and authored more than 100 articles. He is co-author of the 2011 textbook, *Conservation Science: Balancing the Needs of People and Nature*. His work is international in scope conducting research, consulting, and teaching in 20 countries. In 2007, the American Academy of Arts and Sciences elected him as a fellow. A 2012 profile of Kareiva in *Greenwire* was titled, "Myth-busting Scientist Pushes Greens Past Reliance on 'Horror Stories.'"

The StARS Committee would like to acknowledge the following people and organizations for supporting the 2014 symposium.

Faculty Mentors for their hard work and dedication to students' creative work and research: Harshavardhan Bapat, Brytton Bjorngaard, Robert Blankenberger, Meagan Cass, Lucinda Caughey, Hua Chen, Cecilia Cornell, Lan Dong, Keenan Dungey, Sharon Graf, Shane Harris, Tena Helton, Stephen Johnson, Brian Kahn, Holly Kent, Amie Kincaid, Maria Lemke, Mike Lemke, Shoon Lio, John Martin, Amy McEuen, Michele Miller, Mike Miller, Layne Morsch, Jaclyn Peterson, Jeff Robinson, Dennis Ruez, Tiffani Saunders, Hinda Seif, Peter Shapinsky, Frances Shen, Josh Smith, Carrie Switzer, Missy Thibodeaux-Thompson, Lucia Vazquez, Jim Veselenak, Abigail Walsh, Benjamin Walsh and Marcel Yoder.

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Friends of Brookens Library, ECCE Speakers Series, the English Department's Creative Writing & Publishing Series, LGBTQA Resource Office, and the Vachel Lindsay Home for co-sponsoring Dorothy Allison's Keynote Address.

Ray Schroeder, Associate Vice Chancellor for Online Learning, Vickie Cook, Director of the Center for Online Learning, Research, & Service, and the Center for Online Learning, Research, & Service for providing symposium accessibility for online students.

Department of Environmental Studies (Amanda Clayton and Dennis Ruez) for printing the students' research posters.

Lindsey Feger for the graphic design of the symposium's logos, banners, posters, and program.

Parker Sheley and Brytton Bjorngaard (Mentor) for designing the StARS t-shirt.

Michelle Green, Shannon O'Brien, Derek Schnapp, and Blake Wood for assistance with marketing and publicity.

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Randy Williams and Geoffrey Evans for coordination of the catering services at StARS.

Information Technology Service (ITS) for technology support.

Undergraduate Research Steering Committee:

Keenan Dungey (Director)
Holly Kent
John Laubersheimer
Ron Loui
Brian Moore (Administrative Clerk)
Dennis Ruez
Frances Shen
Karen Swan
Benjamin Walsh

StARS – Student Arts & Research Symposium Committee Members:

Meagan Cass
Michele Gribbins
Layne Morsch
Sheryl Reminger
Carrie Switzer
Abigail Walsh



ARTS



**Asterisks indicate student presenters.*

Unsettled



Megan Calcara* and Brytton Bjorngaard (Mentor), Department of Art, Music, & Theatre

The theme I am exploring in my series of photographs is dealing with a vagrant demographic in our society. Often we try to search for causes or ways to help

homeless individuals. But it seems like in most metropolitan areas, every corner turned is someone new resting on the sidewalk or asking for money due to lack of resources; being relationally, physically, financially or emotionally. But what I see are some of the most vulnerable people, leaving behind trails that become documentation or records that I have become interested in. Their items become personified and with that comes a story. The experience of putting myself in a vulnerable position while capturing my photographs leaves me with a valuable connection to the images that I can take with me forever.

Purpose



Matthew Dixon* and Mike Miller (Mentor), Department of Art, Music, & Theatre

A set of keys is so commonplace that they do not inspire a second glance. Their designs are typically bare-bones and utilitarian, and most serve a simple,

singular purpose that is arguably taken for granted after use day-in and day-out. Upon consideration, however, one may realize how a key could serve as a symbol of power and potential – just ask anybody who has ever lost one (or an entire set). For example, someone holding the key to a door is free to come and go as needed, and can even allow or restrict access as he/she sees fit. A key can also be a means to action, enabling something (or even perhaps someone) to move or stop. When a key is found by someone it does not belong to, questions arise: “Where did this come from?”, “Who does this belong to?”, “What purpose does it serve?” The imagination can take off with speculation, especially if the key in question is unlike anything ever seen before. With this concept in mind, my work is a collection of atypical keys, allowing viewers to develop unique theories as to their exact origins and purposes. Each key is designed within a 3D modeling program (SketchUp Make) and then given physical form by a 3D printer utilizing heated plastic. 3D modeling allows for endless variation in design, creating one-of-a-kind objects with a singular story to tell. 3D printing produces very precise physical models, lending each key authenticity and conjuring an imagined world waiting to be unlocked.

Peacock's Tribulation



Robert I. Elmers IV* and Brytton Bjorngaard (Mentor), Department of Art, Music, & Theatre

Ideas come to me slowly and once I have an idea on a theme, creative perfection takes hold. I become land-locked, set on one direction, reluctant to waiver

from the task set forth until the project is complete. This is a style I am accustomed to and gives me a unique way of looking at art. The convergent side in me knows what I want but lacks the starting point. And the divergent part of me tries to break traditional rules of art but doesn't allow for expansion of other possible ideas. Once I am aware of the workload, I become efficient, yet while I work, inventive ideas are applied when they come to mind by sparks of visual queues. My idea of art is to work from the mind directly with little to no use of drafts; taking a high-risk adventure to creativity is my motive and becomes my self-reward when completed. I look at art in the process of creation, as art itself. Working within a time frame is not what I am about and I believe that art should flow naturally (not lazily) so that all aspects of design, all feelings and emotion to structure, and all self-involvement to creating a piece of art is properly reflecting the artist, hence, the artist reflecting the art. And this project reflects my temperament with how I think of art and how I represent it.

Lifelong Interests



Andy French* and Shane Harris (Mentor), Department of Art, Music, & Theatre

The mixed media sculptures I make are familiar to most audiences due to the fact that most of my works are recognizable objects or figures, but the deeper context of the objects may be only understood by a select few in the audience. The reason for this is because most of my work is heavily influenced by my personal interests such as film, television, books, music, video games, and other pop culture icons or figures. Most of my work does not have a deep seeded meaning that makes a statement on modern society, politics, religion, etc. The meaning of my work will be the back-story that each individual viewer or I conjure up for the figure or objects. This way I feel a closer connection to the work I make because I truly care about what I have made. I enjoy the idea of both the audience and I creating a back-story for a piece because what I like most is a good narrative.

Crackers

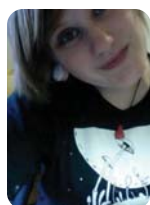


Thomas A. Gebhardt* and Shane Harris (Mentor), Department of Art, Music, & Theatre

I was looking to do something fun. Cleaning my studio, I found not-so-ordinary everyday items, in the not-so-ordinary place of an artist's studio.

Ketchup, mustard, Life Savers, nuts and bolts, etc. Then I stumbled upon my inspiration, a saltine cracker. That's right, a saltine cracker. What more than doing a body of work centered around a saltine cracker? I would do giant ones, colorful ones, and dozens of crackers. Do you know that all saltines have 13 holes no matter the baker. It's for breathing and baking purposes. So they don't stay flat. So they don't explode. I made 6"x6" Warhol style saltines of many colors. I created and made a 20" saltine as well. A 12" Goldfish (SOLD!) and a 22" Ritz. Not to mention a treasure chest full of silver and gold saltines just so I can be rich with crackers. What was left to do? Enter the Cracker Jack. I knew that was the next logical step, but how do I relate a cracker jack and make it fun? A chunk of popcorn? That didn't go with the theme. Do I build crackers and meld them together to form a cracker jack? What to do? Then it hit me. A giant jack and ball. The jack would become 28"x24"s of fun. Gold and browns, blended together, just to make look ready to eat. Add a big red ball for added fun and you get what you see before you today. The Cracker Jack. Enjoy!

Anamnesis



Christina Hanula* and Shane Harris (Mentor), Department of Art, Music, & Theatre

There are several people, places, and other concepts that have heavily influenced me as an artist. One of the most compelling categories is people and the relationships that I have established. There is an undoubtedly large number of relationships that are built, however, all of those relationships are not always long lasting. It is always a possibility for anyone to lose a loved one or to have a strong relationship broken down. The ideas behind this piece encompass the importance of past relationships, whether they have been lost or broken. More specifically, it expresses the relationships that I had with my father and grandmother. The elements of this piece reference specific memories and feelings that I have acquired from the relationships with my father and grandmother, and it is able to demonstrate some of the most important events in my life. This piece has allowed me to create something that embellishes the memories that I hold dear. Not only does this piece serve as a memorial for my father and grandmother, but it also serves as a reminder to not take any relationship for granted.

Simple But Meaningful



Lingxuan Huang* and Brytton Bjorngaard (Mentor), Department of Art, Music, & Theatre

As a graphic designer, I love collecting and gathering all the information of a subject together, to make its theme visually and use images to communicate with

people. I use simplified and basic elements or shapes in my design to represent the information and themes in a direct way. I like to play with typography. I think typography is a very important part of visual communication. Each typeface has its own special personality. Bold and thin, big and small, all can give people a different feeling. I start by sketching out some basic layouts by hand; this helps me arrange different possibilities and increase the work efficiency on computer. With design software I can freely design my own work, create whatever I want. Most of my artworks are inspired and influenced by Bauhaus and De Stijl Art. I like to make things with simplified, ordered, and geometric abstracted forms, also with simple and basic colors, to make people have the feelings of clean, meaningful, trustful, and fun. "Simple without loss of information," is my style. Also I am always very careful and demanding with details. "Pay attention and be accurate to each pixel," is the sentence I will keep in my mind in my whole design career.

Nervous Habit



Kayla Ico* and Jeff Robinson (Mentor), Department of Art, Music, & Theatre

The content of my work derives from personal feelings of anxiety and getting lost in thought. I have dealt with these internal struggles throughout my schooling, and I try to create a similar experience for the viewer in my work. I make paintings of figures placed against a busy and abstract background. The background spaces are typically filled with gestures and marks that relate to the actions of coping with anxiety and trying to find oneself amidst an internal chaos. Anxiety-induced responses such as nail biting, lip biting, and digging nails into my skin manifest in my work as aggressive paint handling, as paint skins peeled and affixed to the surface, and as violent gestures such as scraping away at layers of paint. The figures in my paintings emerge from this complex layering of painterly marks as if in a struggle to free themselves from these actions. The process of making this work is a way of channeling these feelings into something constructive rather than continuing to bottle it up.

Hidden



Jemilla Sadick-Raji* and Jeff Robinson (Mentor), Department of Art, Music, & Theatre

My work draws influence from childhood memories of my family. My father, among many things, was an artist from Ghana. In particular, I remember his sketches and the art that he collected from various places. My work explores mythical narratives through the use of symbolic imagery. I am interested in symbols, and how they can be used to elaborate and give metaphorical meaning to a story. Often, the stories I tell in my work are subtly implied, and the viewer is left to create their own meaning. At other times, the themes I explore are more apparent, and in these moments the viewer is given access to the underlying meaning. When people see certain symbols, they are able to interpret a story based on the associations they have to the symbols used. I work with a range of media, some of which include paper, acrylic paint, watercolor, glue, wood, fabric, and threads. I experiment with the ways that different media interact with one another in my work, and I am interested in how combining media can enhance the meaning of the myths I explore.

Every Face a Story



**Andrew Sill* and Shane Harris (Mentor),
Department of Art, Music, & Theatre**

I was raised in the art world. It was often a very dull place to be raised. My father works in art and as far back as I can remember I would accompany him on gallery tours bored out of my mind. As I have grown into becoming a member of the artistic community that feeling has remained with me. My current work very much tries to combat and counteract that part of my personal experience. My series of ceramic faces play as a way to entertain my 8-year-old self. A variety of super heroes, cartoons, surreal, and grotesque wall hung faces attempt to play with the audience. Bright colors and high gloss are used to give them a brand new toy feeling. The variety and amount are intended to remind the audience of collecting action figures or baseball cards. They can be arranged to play off of each other in various ways. For the adult audience there is an element of charm, craft, and humor about each piece. Every face is intended to let your mind run away and create a story with each character. Some of the faces I have a special connection to or story to accompany it. Others I'm meeting myself for the first time as they emerge from clay. Each piece is an attempt to incept your mind with a comic book, a horror story, a sitcom or a drama. But most importantly each piece is an attempt to remind your inner child that art can be fun.

Passion



Mandy Smith* and Brytton Bjorngaard (Mentor), Department of Art, Music, & Theatre

Life would be meaningless without our passions; while I have been blessed with many things to be passionate about two in particular would be my love for sports and for art. Both of these passions are the reason my artwork has become what it is today. The focus of my content is on the drive and intensity of athletics. Being actively involved in any athletic relation shows the character of individuals; whether the individual is determined, has mental stability, and can physically challenge themselves to limits never before expected. Through the medium of graphic design it is my hope to represent these athletes in an idolizing state, therefore inflicting inspiration in those experiencing the designs. I tend to represent my ideas of passion visually through close ups of the athletes eyes, because I believe William Shakespeare was correct when he said the eyes are the window to peoples souls. Artistically I envy artwork and advertisements made by Nike and Under Armour. Both companies use simplistic actions in advertisements that represent a since of determination, fierceness, and overall competitive nature. Even though my artwork is different from those it still uses clever advertising techniques to sell a product, while making the viewers feel emotionally connected to the content and the athlete. Stylistically my work contains strong contrast with contemporary stylization and I play with incorporating unique shapes. Overall, the emotional connection of passion is my theme from piece to piece, which is an emotion relatable to everyone.

Hare me out



Barbie Sutheard* and Shane Harris (Mentor), Department of Art, Music, & Theatre

Transforming my personal views into a visual language that an individual can relate to and find visually appealing inspires me to create. I aim to construct sculptural works that celebrate femininity and the complexity of the self or personality through flowing forms, gendered colors, and underlying symbolism. I am very invested in using the rabbit form, particularly the ear, as a symbol that is charged with both innocence and sexuality, which fuels the argument of their ability to coexist. The rabbit's ear is visually very vaginal and phallic as it is used to further a reference to sex and gender. In addition to the rabbit's ear, telephones are implored to memorialize our exclusive ability to communicate as humans. This communication can be both emotional and physical as each work envelops its own personal message and experience.

The Story: A Reading



Wright

Monika Wright* (Director), Departments of Business Administration (major), African American Studies, and Theatre Program (minors), Keegan Otwell* (Writer), and Missy Thibodeaux-Thompson (Mentor), Department of Art, Music, & Theatre/UIS Theatre Program



Otwell

For the symposium I wish to direct a reading of a student written original play by Keegan Otwell, entitled *The Story*. *The Story* follows Jeff Andrews, an adolescent freshly admitted into the Pine Ridge Health Center's adolescent psychiatric ward. Jeff firmly believes that the entire world is controlled by "The Author," and because of this he struggles with the people around him regarding these beliefs. We go with Jeff on a journey that disquiets the nature of free will and what it means to be a human, and we watch as Jeff resolves the issues of his reality – the truth of *The Story*. The importance of this piece showcases more than the creativity and originality of the student playwright, it also shines a light on the significant effects of human development and the inner workings of our awareness systems. The reading will be followed by a Q&A session with the cast, director, playwright, and audience.

Cast for *The Story*:
Megan Milewski*
Katie Devlin*
Brock Bleess*
Nicholas Jimenez*
Abigail Gulso*
Liza Torrence*
David Hecht*
Blake Barnes*
Monika Wright*
Alex Shaver*



MUSIC



UIS Campus Relations Photo



Ryan Philyaw,* Duane Willingham,* Alex Ginglen*



Jane Schachtsiek, Laura Drennan, Marylee Rasar, Sarah Schaller



Keenan Dungey, Duane Willingham,* Robert Rose,* Alex Ginglen*



Rachel Brandt, Beverly Compton, Janet Jones



Kylie Gilmore,* Isac Ramos*



Ryan Philyaw,* Duane Willingham*



Kaela Cash,* Ylina Ming*



Alex Skarr,* Kylie Gilmore,* Elizabeth Farris,* Brandon Vandegraft*

Musical Performances by UIS Musicians Thursday 5:00-6:30 p.m. Brookens Auditorium

Auf dem Strom

Ryan Philyaw,* horn; Duane Willingham,* trombone; Alex Ginglen,* piano

Franz Schubert

Extrem

Waltz Op. 36 No. 3

Three Blind Mice

Laura Drennan, Marylee Rasar, Sarah Schaller, Jane Schachtsiek, clarinets

Ilio Valante

Amy Beach/ John Gibson

Bates and Mills

Festival March

Slick Slide Swing

Keenan Dungey, Alex Ginglen,* Robert Rose,* Duane Willingham,* trombones

Francis McKay

Ulrich Niehls

Trio in G

Trio in C

Rachel Brandt, Beverly Compton, Janet Jones, violins

Henri Schradieck

Charles De Beriot

All of Me

Breanna Hunt,* voice; Pamela Scott, piano

John Legend

Somewhere over the Rainbow

Kylie Gilmore,* voice; Isac Ramos,* ukulele and voice

Harold Arlen/ EY Harburg

Concert Duet Number 4

Six Duets for Horn and Cello

IV

V

VI

Ryan Philyaw,* horn; Duane Willingham,* trombone

Vladislav Blaxhevich

Alec Wilder

The Longest Time

Elizabeth Farris,* Kylie Gilmore,* Breanna Hunt,* Alex Skarr,* and Brandon Vandegraft,* voices

Billy Joel/ Arr. Joel Knipe

Duetto

Affettuoso

Allegro

Andante

Presto

Kaela Cash,* oboe; Ylina Ming,* violin

Georg Telemann

Tears in Heaven Eric Clapton
Elizabeth Farris,* voice; Isac Ramos,* guitar

Something There Alan Menken/ Arr. Klad More
(From Disney's *Beauty and the Beast*)
Phylicia Gaddis,* flute; Cassie Sauleiko,* flute; Shyleen Studley,* flute

Amazing Grace John Newton/ Arr. J. Thorpe and A. Wilson
Elizabeth Farris,* voice; Kylie Gilmore,* voice; Pamela Scott, piano

Spiritual Tom Verlaine
Henry Lovel,* guitar

The Lord's Prayer Albert Hay Malotte
Elizabeth Farris,* voice; Pamela Scott, piano

The Great Train Race Ian Clarke
Abigail Walsh, flute

Dance Suite Selections Bach and Boismortier
Sharon Graf, violin; Lynn Fisher, cello

Musical Performances by UIS Musicians

Friday 11:00-11:45 p.m. PAC Lobby

Chul Kang Kim-Yong Sil
Ying Han,* gayagum

Romance Adolphe Blanc
Kaela Cash,* oboe; Ryan Philyaw,* horn; Alex Ginglen,* piano

Moli Fen Fang He Zhang How
Christina Shao,* guzheng

Suo Gan; a Welsh Lullaby Traditional/ Arr. Evans
South Morten and Thamon Hayes/ Arr. Bruce Evans
Gary Kerr, alto and tenor saxophone; Bruce Underwood, alto saxophone; Jared Osland, tenor saxophone; Taylor Dent,* baritone saxophone

Duo J.H. Miramontes/ arr. Ying Han, Abigail Walsh
Ying Han,* gayagum; Ylina Ming,* violin

We'll Meet Again Parker/Charles/ trans. Peter Opaskar
Theme from "Game of Thrones" Ramin Djawadi/
trans. Peter Opaskar
David Dang,* euphonium; Eric Foster,* tuba; David Miller, tuba

Liuyang River arr. Larry Estes/Abigail Walsh
Christina Shao,* guzheng, Ylina Ming,* violin



Eric Foster,* David Miller, David Dang*



Elizabeth Farris,* Isac Ramos*



Kylie Gilmore,* Elizabeth Farris*



Shyleen Studley,* Phylicia Gaddis,* Cassie Sauleiko*



Henry Lovel*



Lynn Fisher, Sharon Graf



Ying Han*



Christina Shao*



Ryan Philyaw,* Kaela Cash,* Alex Ginglen*



Bruce Underwood, Taylor Dent,* Jared Osland, Gary Kerr



Ying Han,* Ylina Ming*



Christina Shao,* Ylina Ming*



Feminine Social Reform in *Uncle Tom's Cabin*



**Alaina Beaird* and Tena Helton (Mentor),
Department of English**

Historians, literary critics, and political scientists have come to consider Harriet Beecher Stowe's *Uncle Tom's Cabin* one of, if not the, most influential anti-slavery novel published in America. All parties recognize

Stowe's book for its merit as an abolitionist text, however, few recognize that the author explicitly wrote her novel for the purpose of addressing and motivating a white, female audience. Stowe hoped that by reading her novel, antebellum women would see the difference they could make in the slavery debate; she wanted them to see that they were just as important as, and perhaps superior to, their male counterparts. After all, it was male politics that got the country into the mess of slavery in the first place. In writing to women, not only does Stowe address the immorality of slavery in a way with which antebellum white women could sympathize and engage, but she also illustrates how her female readers could be the ones to make the change, and, in essence, become the moral redeemers of society. Stowe's ahead-of-it's-time novel can be read as a condemnation of both slavery and patriarchy. In this essay, I argue that Harriet Beecher Stowe uses her novel, *Uncle Tom's Cabin*, to move the slavery debate to the realm of domesticity in hopes of empowering women to reform their society into a matriarchal system.

First name Barbie last name doll



**Maureen Bock*, Departments of
Communication (major) and English
(minor), and Meagan Cass (Mentor),
Department of English**

First name Barbie last name Doll is a reading of a selection of poems from my manuscript. The poems themes include sexuality, gender, and friendship. These poems are autobiographical accounts of the Barbies that were either a part of my childhood or were given as a gift. The goal of this project is to question the heteronormative ideas of gender and sexuality that are taught to children through the medium of toys.

Independent Literary Publishing Finds a Home at UIS with *The Popcorn Farm*



**Jacob Cross* and Meagan Cass (Mentor),
Department of English**

The Popcorn Farm is a fresh literary journal with a taste for all things popping out of the cinematic topsoil. On the University of Illinois Springfield campus in the fall of 2013, we staked a claim

between the two seemingly polarized worlds of literature and film. Our goal is to cultivate art that engages with cinema in unexpected ways, showcasing the community that has grown up around movies. If cinema is a thematic history of the human spirit, we want you to write its footnotes. We look forward to expanding upon where we've been and where we're going.

"Alas! The sunny face of the slave is not always an indication of sunshine in the heart:" 19th Century Enslaved Women and Duality in Religion



**StaLynn Davis* and Holly Kent (Mentor),
Department of History**

Prior to the late 20th century, scholarship dealing with slavery in the United States primarily focused on the lives of enslaved men, almost entirely neglecting women's experiences in slavery. In doing so, historical analysis ignored enslaved women as a central figure in the slave narrative. Demands placed upon enslaved women simultaneously required complete and automatic deference to the will of her slaveholders, conformity to the standards set by the slave community, and a personal commitment to her own religious values. Nineteenth-century Christianity taught obedience to a divine authority through chastity while slaveholders compelled enslaved women into unwanted sexual activity. Publicly and privately, bondwomen endured widespread practices of duality, or competing demands, which permeated every facet of their lives. This paper examines enslaved women in the antebellum United States, discussing how women grappled with the competing demands placed on them by their own religious beliefs, the moral standards of enslaved communities, and the demands placed on them by their owners. The religious beliefs of enslaved women often-times aligned with the moral standards of the enslaved community, whereas in some cases defied the demands of the slaveholders. This research demonstrates that enslaved women pursued their own religious beliefs over the demands placed on them by their owners.

Women's Fight for Their Right to Vote in Illinois



Lauren Getzelman* and Holly Kent (Mentor), Department of History

This project will focus on women's suffrage in Illinois. It gives a brief overview of the battle for women's suffrage in Illinois, and then delves into the campaigns suffragists waged and the strategies they used, finally discussing important Illinois suffragists Jane Addams, Agnes Nestor, Ellen Annette Martin, and Ida B. Wells-Barnett. This project will all focus on the Illinois Women's Suffrage Association (IWSA) and the Illinois Equal Suffrage Association (IESA), and their different campaign strategies. This paper will compare and contrast the IWSA's strategy to keep pressure on the General Assembly and frequently submit suffrage bills, and the IESA strategy of reaching out to newspapers, senators, and representatives. The project will also consider the Illinois Federation of Women's Clubs (founded in 1894), discussing women's clubs' impact on suffrage. This paper will pay particular attention to the Alpha Suffrage Club (an African-American women's club founded in 1913), which was very important in women's suffrage efforts in Illinois. As one of the few clubs for African-American women, the Alpha Suffrage Club was noteworthy for fighting for African-American women's suffrage, unlike the majority of the clubs under the IFWC, which focused on white women's suffrage.

Oppression within Oppression: A Feminist Reading of *The House on Mango Street*



Sherri Martin* and Lan Dong (Mentor), Department of English

Sandra Cisneros's *The House on Mango Street* tells the story of a young American-born Mexican girl growing up in a poor neighborhood in Chicago comprised primarily of Puerto Ricans, Latinos and Hispanic families. Written in diary form, this book captures the essence of a young girl who is coming of age during an era and in a culture where oppression of women was not only common but also expected. At the same time, the male patriarchal society on Mango Street could be found within a larger society that dominated minorities—that is, the United States. America's white male patriarchal government had a history of dominating and oppressing minorities. This presentation examines how Cisneros demonstrates a young girl's unwillingness to comply with societal norms and her desire to escape from the traditional role she was expected to play in Mexican American culture and further to overcome the society that dominated and oppressed the minority community in which she had been born and raised in. Through the young narrator *The House on Mango Street* depicts a clear image of oppression within oppression and one girl's ability to break free from the societal roles imposed on her, thus allowing her to dream what seemed impossible and then made it her reality.

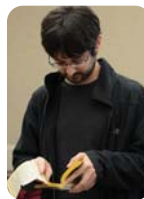
Varina Davis: Change of Mind or Mind Unchained?



Sabrina Miller* and Holly Kent (Mentor), Department of History

This research presents an examination of Varina Davis, the First Lady of the Confederacy, and seeks to reconcile her later views against those that might be expected from the wife of Jefferson Davis. The author examines the sum of Davis's experiences and the varying cultural environments in which she lived in order to determine the motivations and beliefs of this unique woman. The author explores how a patriarchal Southern society and husband resulted in the subjugation of some of Davis' (a native of the North's) more progressive beliefs and how, after her husband's death, her return to the North allowed a more uninhibited Davis to once again give voice to her talents, beliefs, and personality. In Davis's later years, she was known to speak openly about issues such as racial equality and women's rights in ways that caused many southerners, to dismiss her as a traitor to her legacy as The First Lady of the Confederacy. From her famous meeting with Booker T. Washington to her friendship with the widow of Ulysses S. Grant to her views on the intellectual equality of women; it may have seemed to many that she had truly abandoned Dixie. The author posits that the sometimes 'unexpected' or 'controversial' statements she made need not be seen as changes of heart, or even a deliberate rejection of the South, but as the words of a woman who has thrown off the chains of a marital 'union' that forced her to subdue most of her true self.

Uproot: a literary journal



Erich O'Connor* and Meagan Cass (Mentor), Department of English

Uproot started as a class project, in ENG 368 Publishing and Creative Writing ECCE, but *Uproot* has since moved out of the classroom and is engaging the community again, with a second issue. The magazine started with a simple question, "Why would you move here?" It's a question people who are from out of state are often asked. The question implies that Springfield is a boring, flat place. *Uproot's* goal is to find aspects of Illinois, as well as the whole Midwest, that locals and outsiders do not see. *Uproot* wants to show aspects of these places with rich emotional complexity as well as thoughtfulness. We publish fiction, nonfiction, as well as poetry. We also send broadsides to contributing writers as compensation for sharing their work with us and for helping by contributing to the Midwestern literary community. Thanks for reading. www.uprootmag.com

Dominant and Counter Memory Narratives of the 1915 *S.S. Eastland* Catastrophe



Stephanie Riley* and Peter Shapinsky
(Mentor), Department of History

On July 24, 1915, the *S.S. Eastland* capsized in the Chicago River, killing 844 of its 2,500 passengers, which made it one of the worst naval catastrophes in American history. Scholarship on this disaster focuses solely on the reasons for the sinking. However, disasters such as these also imprint themselves on regional and national psyches in the form of public memory narratives. I demonstrate that public memory of the *Eastland* disaster evolved as a series of conversations between dominant memory and counter memory narratives. To explore the development of dominant and counter memory narratives regarding the *Eastland* disaster, this presentation will explore the perspectives of the company that sponsored the ill-fated voyage of the *Eastland*, Western Electric Company and representatives of the victims—largely Polish immigrants. Western Electric Company's position as a world leader in the telephone/telegraph manufacturing industry meant the company had the ability to control the flow of information. Its chief vehicle for promoting its position, the company newsletter, articulated pro-capitalist sentiments, expressed gratitude for the companies who aided in the rescue and relief efforts, and shifted the blame for the disaster off Western Electric. In order to commemorate the victims, representatives of their families penned *Catastrophe: Eastland*. However, because the authors wrote this book in Polish, promoted a socialist agenda, and blamed Western Electric, *Catastrophe: Eastland* had only a limited audience, and had little, if any, chance to displace Western Electric's narrative, thus cementing its position as the counter memory narrative of the *Eastland* disaster.

New Deal Art in Chicago Public Schools



Taylor Traynoff,* Departments of Legal Studies, Political Science (majors), and History (minor), and Cecilia Cornell (Mentor), Department of History

This paper examined murals painted in Chicago public high schools during the 1930s as part of the New Deal arts programs. During the Great Depression, President Franklin Roosevelt organized public relief programs and sought to protect the arts in programs such as the Public Works of Art Program, the Works Progress Administration, and the Federal Arts Project. Throughout Chicago, murals were painted in city buildings and post offices, but if artists painted in high schools, what would be the subject of the art painted for such a specific audience? The murals painted in Chicago's public high schools shared similar themes of mental and physical work to guide and instruct the students—the country's future leaders—on how to return America to prosperity. Under the programs, 145 artists were employed in Chicago alone and, both prior to and during the 1930s, 440 murals were created for seventy Chicago public schools. Throughout the halls, foyers, and libraries of the schools, artists produced images that portrayed hard work in scenes of industry, farming, and science for schools of vocational studies. Images that communicated the contributions of engineers and architects were placed in all-boys high schools, while murals that illustrated the feats of influential women were displayed in all-girls schools. Painting for the New Deal programs was not only an economic benefit for the artists but transformed them into leaders who sought to restore morale for the present, and to preserve morale for the future through their artwork.



UIS Campus Relations Photo







Alchemist Review

The *Alchemist Review* is a 30-year literary tradition at the University of Illinois Springfield and is an online and print-based journal of literary fiction, poetry, and visual arts dedicated to publishing dynamic works by emerging writers and artists in the University of Illinois Springfield community. With an appreciation for print culture, as well as digital technologies and mixed media, *The Alchemist Review* provides a forum for collaboration and exploration within the ever-evolving world of literary publishing. The journal is edited by undergraduate and graduate students at the University of Illinois Springfield. All UIS students are invited to share their creative writing projects. View our website at: <http://thealchemistreview.com/>



Managing Editor: Erich O'Connor

Erich O'Connor is an undergraduate at the University of Illinois Springfield. Erich's major is English. He is this year's Managing Editor of *The Alchemist Review*, but Erich has more hobbies besides managing the UIS literary journal. Erich watches a lot of movies, plays a lot of chess, and reads a lot, as well as writes

his own short fiction on the side. Erich also runs another literary journal called *Uproot*, which focuses on why people move to the Midwest. He has a sister, a brother, and a dog. Erich can't wait to see what *The Alchemist Review* staff will do next year. He hopes that with future staffs, *The Alchemist Review* will continue to establish its presence on the web, as well as continue to make a deeper impression on the UIS community and the literary community.



Poetry Editor & Assistant Production Manager: Maureen Bocka

Maureen Bocka is a Communication major and English minor. She serves as the Assistant Managing Editor of *The Alchemist Review*. Maureen is a senior and is originally from Chicago. When she is not writing poems Maureen enjoys rollerblading, trying

out new crochet patterns, and looking up graduate schools. One thing that would be great to see in the future is to have local Springfield poets come in and work with UIS writers to build the creative writing interest on campus



Fiction Editor: Bianca Bautista

Bianca Bautista is a Sophomore who is a Pre-med student, Sociology/Anthropology major, and minor in Public Health. Her hobbies are focused on creative writing. In her spare time she does text-based roleplays on a forum designed for players who are fans of DC superheroes. Bianca serves as a Fiction

Editor for *The Alchemist Review*.



Fiction & Poetry Editor: Jacob L. Cross

Jacob L. Cross is a Fiction and Poetry Editor for *The Alchemist Review*. He lives in the southwest suburbs of Chicago, where he works in a French cafe and rummages through local bookstores. He studied creative writing and publishing at the University of Illinois Springfield, majoring in English and minoring

in communications respectively. He is the Editor-in-Chief of *The Popcorn Farm* Literary Magazine, a Midwestern journal publishing art and literature inspired by film. He enjoys hiking everywhere from the Smoky Mountains to the Rockies with his wife, playing music with friends, conquering Zelda temples, and eating excessive amounts of sushi.



Poetry Editor: Ryan McConville

Hello, my name is Ryan McConville. I am currently a senior majoring in Political Science with a minor in Philosophy and plan to attend law school upon graduating from UIS. My first journey into writing outside of my major came in the spring of 2012 as a student in ENG 271, Introduction to Poetry with

Dr. Meagan Cass. I was surprised at how much I enjoyed the class and how studying poetry helped in the refinement of my political and philosophical writing abilities. By working with *The Alchemist Review* I am hoping to highlight the importance and benefit of interdisciplinary writing techniques, as well as the liberal arts approach to academic study in general.



Fiction Editor: Scott Scholl

Scott Scholl is a Senior English Major with a focus in Literature Studies and a Minor in Mass Communication/Journalism. Scott has been writing since grade school and creative writing remains his hobby outside of school. He has several other hobbies, from reading, music composition, gaming, hanging out with

friends, to playing the jawharp to game music. Scott and his family are all mostly from Pennsylvania. He moved to the Midwest during the 8th grade. Scott is a Fiction Editor for *The Alchemist Review*. Scott hopes to uphold *The Alchemist Review's* guidelines by watching for work that truly offers a different perspective or change in the normal way of thinking. The way *The Alchemist Review* is going is very optimistic and represents a fresh and new take on the literary community.



Fiction Editor: Robert Von Nordheim

Robert Von Nordheim serves as Fiction Editor for *The Alchemist Review*. He is an English major with a double minor in history and education. His fifth and final year at UIS will end with a student teaching position at Southeast High. Rob's favorite stories are, in no particular order, *The Heart is a Lonely Hunter*,

The Glass Menagerie, and *The Nightmare Before Christmas*. He's nearly always reading something--if you count text boxes in video games; when he isn't, Rob likes to visit his twin brother in St. Louis and sing karaoke.



Design and Construction of a Telepresence Robot



Noland

Kyle Noland,* Brian-Thomas Rogers,* and Josh Smith (Mentor), Department of Computer Science

Our interests concern the possibilities and challenges of building a robot that one can connect to through the Internet and have a telepresence at another location. The goal of the project is to design and build a hardware and software structure that will allow for a robot to be controlled by a user while relaying both a video and sound stream to and from the enclosed system. Using a video chat program, such as Skype, will be essential to allow for a secure and familiar environment that's already well tested and fit for expansion. For platform independence we are considering the feasibility of a web application so that the robot can be controlled from any modern web browser. The

Rogers

tri-lambda drive base uses a triangular design using mecanum wheels for multi-directional movement. Each wheel is controlled independently from the others allowing for increased control and movement accuracy. This structure, both in software and hardware is made with usability in mind for the user. Our other challenge, as is the challenge for any major robotic project, is power consumption. In order to keep power consumption as low as possible we are employing the use of the Raspberry Pi credit-card-sized single-board computer and the Arduino microcontroller. With the use of these technologies we are hoping to allow a user to stay connected for as long as a couple of hours before requiring a recharge. Once assembled, we can make suggestions on improving the design based on development and tests.

Using Vision for Autonomous Robot Control



Keith Wallace* and Lucinda Caughey (Mentor), Department of Computer Science

We are interested in using robot vision to control an autonomous robot. We were able to utilize the robot built by FIRST Robotics Team 4156 for this year's competition as the test bed for integrating vision-based control routines in an autonomous robot. There were two main tasks to complete:

1. Using a 2-dimensional camera to acquire accurate environmental information.
2. Using the resultant image information in conjunction with other sensors/actuators to the position the robot and accomplish a proscribed task.

We have explored several algorithms for image object recognition and the extraction of spatial data. Our final system accurately acquires its target, positions the robot, and launches a projectile autonomously. We are currently working to increase the integration of the vision system with additional sensors to build a more complete internal model of the environment so that our robot can accomplish additional tasks autonomously.





Ecological Alternative Dynamic Regimes, Regime Shifts, and Community Change in a Newly Restored Floodplain Lake



Logan Benedict,* Department of Biology, and Michael Lemke (Mentor), Department of Biology & Therkildsen Field Station at Emiquon

Alternative dynamic regime theory, formally alternative stable state theory, of floodplain lakes is characterized by total system shifts between a turbid algae-dominated state and a clear aquatic vegetation-dominated state. While this theory has been rigorously tested elsewhere, restored lakes are largely ignored and even less focus have been given to an understanding of multiple ecological community-level shifts. I am interested in large community shifts and lake alternative dynamic regime theory in Thompson Lake at The Nature Conservancy's Emiquon Preserve, Lewistown, IL since restoration. My research brings together five years of data collected by the investigators at UIS, the Illinois Natural History Survey, The Nature Conservancy, MiCorps and the Department of Environmental Quality in Michigan, and affiliates at The University of Maringa, Brazil. This data will be analyzed to better understand changes in fish, zooplankton, phytoplankton, aquatic vegetation communities and correlations with the physical and chemical parameters will be completed. These data will be compared with a matching five-year data set from a non-restored lake, Lake Sweezy, MI. Preliminary results reveal a sudden large scale shift across biotic communities in Thompson Lake potentially shifting the entire lakes dynamic. Further analysis will reveal the drivers that cause regime changes within Thompson Lake that will be used to create a predictive ecological model. This research will provide insight into future restoration efforts worldwide and further understanding of restored floodplain lake behavior.

Secondary Production of Benthic Macroinvertebrates in a Newly Restored Lake



Melissa Benedict,* Department of Biology, Michael Lemke (Mentor), Department of Biology & Therkildsen Field Station at Emiquon, and A. Maria Lemke (Mentor), The Nature Conservancy, Illinois River Project Office at Emiquon

Secondary production is the formation of living mass of a heterotrophic populations over time. A large number of studies have quantified secondary production of benthic macroinvertebrates in streams and rivers. Few studies have attempted to measure this value in lakes and wetlands, while even fewer studies attempt to quantify this value for restored lakes. Measurement of secondary production in newly

restored Thompson Lake on the Emiquon Preserve, Lewistown, IL was measured by sampling 15 sites every 3-4 weeks for one year for years 2004-2005, 2008-2009, and 2013-2014. These years represent pre-restoration, early restoration, and late restoration states respectively. Measurement of secondary production will be quantified through the use of regression equations that utilize head capsule width or total body length. Water quality parameters have been recorded and will be used to correlate with measured secondary production values. Largest values of secondary production are expected to be present in late restoration samples, and restoration should bring the return of ecologically important groups such as mussels and fingernail clams. The results of this study will provide a perspective on how benthic macroinvertebrate communities in lakes respond to restoration and their relative contribution to trophic dynamics.

Enhancing Bacterial Denitrification Rates by using nanoscale zero valent iron (nZVI)



Britz

Jesse Britz,* Ritesh Uppuluri,* James Johnson,* Aubrey Watson,* Stephanie Gorsuch,* Nicki Vanderpool,* Harshavardhan Bapat (Mentor), and Keenan E. Dungey (Mentor), Department of Chemistry

Zero valent iron nanoparticles (nZVI) are effective catalysts due to their large surface area to volume ratios. One such catalytic application of nZVI explored in this research was to enhance bacterial denitrification in agricultural soils. Excess nitrates in agricultural fields are environmental pollutants and should be reduced to prevent degradation of surface waters (lakes, rivers, oceans). In this experiment, nZVI was prepared in a sustainable manner using biochar from Milo seed that was impregnated with iron (III) salts; the iron was then reduced by carbothermal reduction. To test the denitrification rate, the prepared nZVI was added to a reaction mixture containing low-nutrient bacterial media, a culture of *Pseudomonas aeruginosa*, and sodium nitrate. A ratio of 75 mL low-nutrient media to 10 mL bacterial culture was found to be ideal for the reaction containing bacterial culture as it showed the greatest denitrification rate. The reaction mixtures were placed in a shaking incubator for a week and samples (5 mL) were collected every 24 hours and frozen. The amount of nitrate present in each sample was determined by ion chromatography. Results indicate that the denitrification rate was greatest in the mixture containing both nZVI and bacteria. Comparison among the different iron sources will be made, and suggestions for future research will be presented.

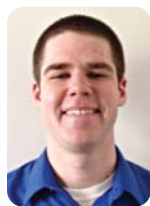
The Past and Present Uses of Breast Milk



Annu Daniel,* Department of Biology, and Jaclyn Peterson (Mentor), Capital Scholars Honors Program

The mother's breast milk is the key to jump starting the baby's immune system. Given the nutritive value of human breast milk, people have found medical uses for it in the past and present. This presentation will describe the value of human breast milk and review its history of medical uses. This interdisciplinary project uses historical analysis to review the literature on the uses of human breast milk from 1584 to the present. In addition, biochemical analysis of the molecular components of breast milk will provide insights into the medical processes for which breast milk has been effective. The research covers a wide array of topics in the use of human breast milk but only a few will be mentioned here. Scientists found a huge decrease in risk for ADHD in infants that are breastfed. The discovery of stem cells in breast milk suggests a promising alternative to the controversial use of embryonic stem cells in research. Breast milk is seen as a template to engineer medications to fight diseases like *Giardia Lambia*. A result from the historical analysis is that whole breast milk was used for many different illnesses in the past but as medicine became more specialized, scientists isolated different components of breast milk. Given our current biochemical understanding of breast milk, in the future the molecules isolated from breast milk can be used to further medical research.

Inhibition of Carboxypeptidase B



Nicholas Decker,* Departments of Biology (major) and Chemistry (minor), and Layne Morsch (Mentor), Department of Chemistry

Carboxypeptidase B (CpB) is a pancreatic digestive enzyme that functions in the hydrolysis of the basic amino acids lysine and arginine at the carboxy terminal end of a protein. It is known that a complex of zinc and imidazole is a weak competitive inhibitor of the enzyme. Analysis of CpB was performed by monitoring its reaction with hippuryl-L-arginine (HLA) and associated absorbance readings. Since HLA is a derivative of arginine, CpB cleaves it resulting in the production of hippuric acid, which causes an increase in absorption at 254 nm. By monitoring absorbance changes in the reaction compared to a pure HLA absorbance standard, the progress of the reaction and its initial velocity of 0.175 mM change per minute were recorded. A Lineweaver-Burk plot of the decomposition of HLA was analyzed to determine the maximum velocity of the reaction and calculate a Michaelis constant of 1.2 mM HLA. The reaction was repeated using various concentrations of imidazole and zinc sulfate, in which inhibition percentage was measured for each concentration. An IC₅₀ of 56.99 μ M was then determined. This value was used to calculate the inhibition constant K_i of imidazole, which was calculated to be 28.61 μ M. Currently, the synthesis of an imidazole analog is being performed. Inhibition properties of this molecule will be determined using the developed method.

Cataloging the Plant Diversity of the UIS and Emiquon Tallgrass Prairie Restorations



Peterson

Haley Gossage,* Sara Peterson,* and Amy McEuen (Mentor), Department of Biology

With more than 99% of Illinois tallgrass prairie converted to other land uses, prairie restorations are critical for maintaining our state's natural heritage. Cataloged specimens aid conservationists who are conducting floristic surveys. The goal of our project was to create reference samples from three tallgrass prairie restorations in Illinois. Specimens were collected from the University of Illinois Springfield Prairie and the Lincoln Land Community College Prairie in Springfield, IL, and from the prairie restorations at Emiquon Preserve in Havana, IL. Sufficient specimens were collected in order to make herbarium sheets available for researchers and students at each of these locations. When specimens were collected, the scientific name, common name, location of collection, and date were recorded. Unknowns were also collected and identified to species using standard taxonomic keys. Specimens were dried and then mounted on herbarium sheets with an informational tag attached. Plant specimens were collected from 2008 to 2013, from June until August of each year. To date, 78 different species have been identified, 19 of which are non-native species, and 59 of which are native species. The collected specimens will be useful for future identification of species at these sites and for the general study of tallgrass prairie systems. They may also aid in determining how prairies change through time in terms of changing phenologies (timing of events such as flowering) and species composition.

Density Mapping of Trees on the University of Illinois at Springfield Grounds using Cloud Enabled GIS



Nate Hoyle,* Departments of Environmental Studies (major) and Biology (minor), and Dennis Ruez (Mentor), Department of Environmental Studies

From a land management perspective, the composition and density of trees on the University of Illinois at Springfield campus were examined. An ArcGIS cloud connection, a smartphone application and a web editing map were used to collect the data. I found that the overall diversity of trees was dominated by the *Acer* (maple) genus, making up 41% of all trees on the UIS campus, with *Acer rubrum* (red maple) the single most common species in the study area at just under 95% of all maples. The study further found that the heterogeneity of trees on campus was much higher in the older, eastern part of the campus and significantly lower on the newer, western side of campus; the eastern part of campus had most species present on campus and the western part had only about half of the species present on campus. Furthermore, the west side of campus is dominated by linden and bradford pear trees that are of aesthetic value but are both prone to damage by wind and easily infected by disease. The lack of biodiversity of trees along the campus "ring road", which consists solely of red maples, predisposes this subpopulation to a possible crash due to species-dependent diseases such as *Verticillium* wilt, and also to widespread wind damage

due to the weak wood inherent in the *Acer* genus. This is a significant concern from a land management perspective because promoting biodiversity, even at the cost of aesthetics and immediate gain, can result in the long term stability desired in settings such as college campuses.

A Novel Hyaluronidase Activity from the Venom of the Skeleton Tarantula *Epebopus murinus*



Daniel T. James* and **Stephen R. Johnson (Mentor)**, Department of Chemistry

Hyaluronidase, a glycosidase enzyme, catalyzes the hydrolysis of hyaluronan, a constituent of the extracellular matrix (ECM), to lower the viscosity of this matrix to increase a tissue's permeability. Used in medicine in conjunction with other drugs, this enzyme can speed the delivery and dispersion of a molecule. The study of venomous components is a novel approach to understanding the biological roles they can play in medical research. Venoms are a rich source of proteins and peptides, including this class of enzymes that is commonly referred to as a "spreading factor." In our investigation, we examined the venom of *Epebopus murinus* (Family: Theraphosidae) to characterize a suspected hyaluronidase activity. The venom was purified by high performance liquid chromatography and subsequent fractions were characterized by turbidometric enzyme assays under a variety of experimental conditions. One fraction contained a protein band at a Mr of ~55 kDa and showed a unique specificity for hyaluronan as well as characteristics known for this enzyme class. With novel studies showing promise in reducing tumor aggressiveness through hyaluronan eradication, a further and more comprehensive biochemical examination of this fraction may provide a new class of anti-cancer therapeutics.

Evaluation of Three Dimensional Single Walled Carbon Nanotube Composites for Bone Tissue Engineering



Benjamin J. Main,* Department of Chemistry, Saadiq El-Amin, Surgery - SIU School of Medicine (Mentor), and **Stephen R. Johnson (Mentor)**, Department of Chemistry

The purpose of this study was to develop three dimensional single walled carbon nanotube composites (SWCNT/PLAGA) using 10mg single walled carbon nanotubes (SWCNT) for bone regeneration, to determine the mechanical strength of the composites, and to evaluate the interaction of MC3T3-E1 cells via cell adhesion, growth, survival, proliferation, and gene expression. PLAGA (poly lactic-co-glycolic acid) and SWCNT/PLAGA microspheres and composites were fabricated, characterized, and mechanical testing was performed. MC3T3-E1 cells were seeded and cell adhesion/morphology, growth/survival, proliferation and gene expression analysis were performed to evaluate biocompatibility. Imaging studies demonstrated microspheres with uniform shape and smooth surfaces, and uniform incorporation of SWCNT into PLAGA matrix. The microspheres bonded in a random packing manner while maintaining spacing, thus resembling trabeculae of cancellous bone. Addition of SWCNT led to greater

compressive modulus and ultimate compressive strength. Imaging studies revealed that MC3T3-E1 cells adhered, grew/survived, and exhibited normal, non-stressed morphology on the composites. SWCNT/PLAGA composites exhibited higher cell proliferation rate and gene expression compared to PLAGA. These results demonstrate the potential of SWCNT/PLAGA composites for musculoskeletal regeneration and bone tissue engineering (BTE), and exhibit great promise in orthopedic applications as they possess the combined effects of increased mechanical strength, cell proliferation, and gene expression.

A Sample of Light Curves of Type II_n and Other Unclassified Supernova



Justin Mock* and **John Martin (Mentor)**, Department of Chemistry

Most massive stars end their lives as supernovae, powerful explosions that destroy the progenitor and often outshine the host galaxy. Supernova impostors are eruptions that are visually as bright as a supernova but the star survives. These phenomena help advance our understanding of high-energy physics that are difficult to reproduce in the lab. Supernovae are primarily classified according to their spectra however the light curves (decline in brightness from the peak) can vary greatly within a spectral class. It is also difficult to identify impostors using spectra alone. Some supernovae exhibit unique behaviors in their light curves which indicate gaps in current models. A larger sample of light curves would help increase understanding of what causes these differences. Thus, in order to increase the sample size, several light curves are presented here as part of our ongoing efforts to study interesting supernovae and impostors.

Soil Organic Carbon and Total Nitrogen Storage in Two Restored Tallgrass Prairies at Emiquon in Illinois: Potential for C Sequestration



Sophia Pham,* Department of Chemistry, and **Hua Chen (Mentor)**, Department of Biology

Terrestrial ecosystems play important role in carbon (C) and nitrogen (N) cycle. The loss of prairies for croplands results in a release of significant amount of C from soil organic matter (SOM) into atmosphere. Prairie restoration from croplands has potential for C sequestration. The overall goal of this study was to quantify C and N storage of SOM of two restored tallgrass prairies at Emiquon in Illinois and explores the C sequestration potential of these two tallgrass restored prairies. Emiquon #18 site and Emiquon Fish and Wildlife (FW) site are the two restored tallgrass prairies that were restored from croplands in 2001 and 2007, respectively. Soil samples were collected along a 60-m long transect at each site in summer of 2008. Soil samples were collected every 20 m using a 4 cm diameter stainless steel soil corer from top 20 cm and 20-40 cm. A CHN Elemental Analyzer (PerkinElmer 2440) was used to measure the SOM C and N concentration. In addition, SOM C and N concentration data of 31 sites of native tallgrass prairies in Midwest (Fierer et al. 2013) were used to estimate C and N storage. The study

indicated that average soil organic C (SOC) concentration at top 20 cm and 20-40 cm of Emiquon #18 and Emiquon FW was 1.29% and 0.90% vs 1.94% and 2.04%, respectively. The average total N (TN) of soil at top 20 cm and 20-40 cm of Emiquon #18 and Emiquon FW was 0.07% and 0.04% vs 0.16% and 0.16%, respectively.

A Biochemical Characterization of the Rostral Secretions from the Giant Water Bug *Lethocerus americanus*



Daniel M. Schafer* and **Stephen R. Johnson (Mentor)**, Department of Chemistry

The giant water bug *Lethocerus americanus* (Family: Belostomatida) is a highly aggressive aquatic predator that feeds on insects and small fish. Colloquially known as toe-biters or electric-light bugs, they seize prey with raptorial forelimbs and a paralyzing and painful injection is made by secretion of a white fluid from a pair of cephalic glands at the base of a rostrum. In this study, a proteomic investigation utilizing mass spectrometry and various electrophoresis techniques was used to explore this venom secretion. While the secretion of one aquatic hemipteran, *Abedus herberti*, has been studied chemically and found to contain four steroids (desoxycorticosterone, pregnenolone, progesterone and 3-epipregnenolone), *Lethocerus americanus* is the largest and most formidable of the eight genera found in this family with no current work cited in the literature. Our investigation reveals a much richer and more diverse solution ranging from small molecules of less than 150 Da similar to that seen in *A. herberti* to large protein complexes of 350 kDa. The use of steroids for defense has been seen in other terrestrial insects, however, it does not explain the paralytic or at a minimum, the pain associated with envenomation. A further and more comprehensive biochemical examination of the venom from this family of insects may reveal peptides and/or proteins that elucidate these actions.

Phosphorylation of AKT Pathway in GH injected Liver of Ames Df Mice

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Amongst all the signaling pathways throughout our body, none has more prevalence in medicinal research than that of PI3K-Akt signaling. This pathway dictates in areas of cell survival (longevity), pathogenesis of cancer and age related diseases. Evidence of phosphorylation states of proteins involved in the Akt Pathway allows various branches of science and research opportunities to formulate a scientific design or motif for not only therapeutic drugs but for more of a deeper understanding of how the human body's complex extra and intracellular milieu of every minute cell "speaks" to one another, making order out of chaos. This analysis attempts to provide a small window into phosphorylation of the AKT pathway as related to the effects of increased GH levels in cells of liver tissue samples from GH injected first week of age Ames Dwarf mice compared with a controlled group of Ames Df and the liver of Normal mice. The GH induced PI3K-Akt

signaling pathway involving pAKT (308Thr), pAKT (473Ser) and non-pAKT were examined implementing protocols involving homology of tissue samples, protein Assay and normalization, electrophoresis (Western Blot) and primary and secondary phospho-specific antibodies which are essential tools in the detection of the phosphorylation state of a protein. Finally discussions as to how the researcher utilizing Western Blot can improve her/his techniques as well as its pitfalls and questions in reference as how this small piece of the puzzle can provide critical insight into the investigation of functional proteomics, pathology of diseases pertaining to the endocrinology, oncology, cell longevity and apoptosis.

Pesticide Effects on Growth of *Morchella angusticeps*



Williams

Wyatt T. Williams,* **Brittnee J. Wojciechowski,*** and **James M. Veselenak (Mentor)**, Department of Clinical Laboratory Science



Wojciechowski

The mushroom *Morchella angusticeps* (Black Morel), a common edible species found around the Midwest region, may be facing environmental challenges. A study on the growth of morel mushrooms indicates that common pesticides, which do not specifically target fungus, inhibit their growth. The concern is that run-off as well as air dispersal from agricultural applications may contain concentrations that could inhibit the growth of the fungus. The mycelia of *M. angusticeps* was tested for effectiveness of growth against several types of pesticides at concentrations from 0.5% - 2.0% with 1% being the field concentration. The analysis showed that the pesticides, Benomyl, Crossbow, and Glyphosate (Roundup), inhibited the mycelial growth completely at the tested concentrations, while Captan only partially inhibited growth. Simazine partially delayed mycelial growth as compared to the control; however, the mycelium was able to reach the same diameter as the control plate after 146 hours. Additionally, the Glyphosate, the most used herbicide in the U.S., was diluted to an endpoint to determine at what levels the chemicals no longer inhibited mycelial growth. The results may suggest that even small concentrations of pesticides in run-off may affect the growth of the morel mushroom especially in woodlots adjacent to farm fields.

Screening of *Monarda fistulosa* for Antimicrobial Properties



Kristen Zanon* and Lucia Vazquez (Mentor), Department of Biology

Many plant species have been used throughout history for medicinal purposes to treat a wide variety of ailments. In 2004 it was estimated that at least 25% of all the prescription drugs in the United States and Canada are derived from or modeled after plants or plant products. With the ever-increasing problem of drug-resistant bacteria, there is a continuous search of new pharmaceutical compounds to combat

this problem. The purpose of this research is to test the antimicrobial properties of plant extracts from wild bergamot (*Monarda fistulosa*), a plant species in the mint family. Crude acetone and methanol extracts from flowers and leaves were prepared and tested for antimicrobial activity using the Kirby-Bauer (disc-diffusion) method. The results showed that *Monarda fistulosa* extract inhibited the growth of *Bacillus subtilis* at the concentration of 10µg/µl. However, this plant extract did not suppress the growth of *Pseudomonas aeruginosa*. Additional bacterial species to be tested include *Staphylococcus aureus*, *Escherichia coli* and *Bacillus cereus*. The fact that plant extracts from *Monarda fistulosa* do show antimicrobial activity against *Bacillus subtilis* suggests that this property may extend to other bacterial species. Consequently, *Monarda fistulosa* could be a potential source of antimicrobial compounds.



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From Asian Fusion to Asian Hipster Cuisine: Consuming Cosmopolitanism and Authenticity



**Megan Bott* and Shoon Lio (Mentor),
Department of Sociology & Anthropology**

There had been significant public attention paid to the new Asian hipster chef such as Momofuku's David Chang, Danji's Hooni Kim, Mission Chinese Food's Danny Bowien and many others. The popularity of this Asian hipster cuisine can be understood as part of the high income gentrification of the urban landscape and the emergence of a hip cosmopolitan food consumption culture whose tastes are shaped by the mass media such as the various cooking shows that have sprung up on television, food blogs as well as social media technology (Mannur 2005; Satler 2003; Siu 2013). This paper will discursively analyze the food magazines articles, blogs, and cookbooks of several hipster/fusion chefs to examine the construction of authenticity, cultural appropriation and the construction of a cosmopolitan urban identity.

Emotional Labor in the Service Industry and the Role of Job Involvement



Brust

Sarah Brust,* Department of Business Administration, Allison Burrus,* Master of Business Administration Program, and Benjamin Walsh (Mentor), Department of Management



Burrus

The service industry is the largest employment sector in the U.S. Employees' exposure to emotional labor has risen as employees attempt to meet the emotional demands of their jobs. Emotional labor strategies drain resources, yet their effects are not uniform, as insincere expression of emotion (surface acting) is more harmful than when employees attempt to experience the emotions they must show (deep acting). Thus, it is important for research to continue to examine antecedents and consequences of emotional labor. This study examined turnover intentions as an outcome of emotional labor strategies, and job involvement as a focal predictor. We hypothesized that levels of job involvement will influence the type of emotional labor strategy used, such that more involved employees will be less likely to report surface acting and more likely to report deep acting. Grit, a personal resource, was also hypothesized to buffer the hypothesized negative effects of emotional labor strategies on turnover intentions. Data were collected using snowball sampling in which students recruited employed participants to complete an online survey. We focused on the responses of 297

individuals with direct contact with customers. Hypotheses were tested using multiple regression. Results showed that job involvement had negative direct and indirect effects on turnover intentions, but only through surface acting. Hypotheses concerning the moderating role of grit were not supported. This research should further managers' understanding of factors that can influence the type of emotional labor strategy used by employees, and in turn help to reduce employee turnover intentions.

Grit and its Impact on Work Ability



Burrus

Allison Burrus,* Master of Business Administration Program, Sarah Brust,* Department of Business Administration, and Benjamin Walsh (Mentor), Department of Management



Brust

The goal of our research was to explore the relationship between grit and work-related variables. Grit is defined as "perseverance and passion for long-term goals" (Duckworth et al., 2007, p. 1087). In line with previous research, we expected an individual with a high level of grit would demonstrate a high level of work ability. More generally, we were interested in the mediating role of thriving in the relationship of grit and work ability. Thriving is considered a psychological state characterized by a sense of energy and vigor, in which vitality and learning are experienced (Porath et al., 2011). Because an individual with a high level of grit is passionate about long-term goals and likely acquires knowledge and skill along the way, we hypothesized that grit would be positively related to vitality and learning, the two dimensions of thriving at work. In turn, we hypothesized that high levels of vitality and learning would positively correlate with work ability. Data were collected from 401 working adults using a snowball sampling technique in which undergraduate students recruited full time employees to participate in an online survey, with self-report measures of all variables. Hypotheses were tested using multiple regression analyses in SPSS. Results supported our hypothesis that grit is positively related to vitality and learning. Similarly, results supported the hypothesis that vitality is positively correlated with work ability. However, learning was unrelated to work ability as originally hypothesized. Implications for practice and directions for future research will be presented.

Positive Affect and Social-Emotional Development from 6 to 36 Months

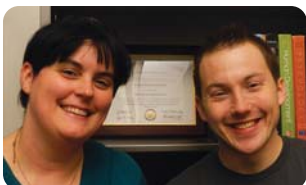


Alexander Fruth,* Michele Miller (Mentor), Department of Psychology, UIS, and H. Hill Goldsmith, Department of Psychology, University of Wisconsin-Madison

Early positive affect is associated with the development of social competency and empathy in children (Volbrecht, Lemery-Chalfant, Aksan, Waxler, & Goldsmith, 2007). Strong social skills and positive emotionality have also been linked to school success (McClelland, Morrison, & Holmes, 2000; Lepper, Corpus, & Iyengar, 2005; Garner & Waajid 2012). This study examined the stability of mother-, father-, and experimenter-rated positive affect from 6 to 36 months and at 36 months, the association of positive affect with experimenter-rated components of social-emotional development. Participants included 900 children (463 females, 437 males) assessed at 36 months. Many were also assessed at 6 (N=251) and 12 (N=352) months. When children were 6 and 12 months of age both mothers and fathers separately completed the Infant Behavior Questionnaire (IBQ; Rothbart, 1981), a caregiver-report temperament measure. At 36 months, caregivers again separately completed the Children's Behavior Questionnaire (CBQ -106 item version, Rothbart, Ahadi, Hershey, & Fisher, 2001), a parent-report instrument that assesses temperament in children ages 3 to 8 years. We examined the positive affect scale from both questionnaires. Additionally, at 36 months, experimenters rated positive affect along with other school readiness related aspects of social-emotional development, such as attention to tasks and social engagement. Caregiver- and experimenter-rated positive affect exhibited moderate stability from 6 to 36 months of age with significant correlations ranging from .12 to .55. At 36 months experimenter-rated positive affect significantly correlated with many aspects of social-emotional development, especially enthusiasm ($r = .54, p < .01$) and social engagement ($r = .58, p < .01$).

Fact or Fiction? Individual Differences and the Spread of Urban Legends

Wesley Hill,* Department of Psychology, Rachel Tohme,* Department of Human Development Counseling, Carrie Switzer and Marcel Yoder (Mentors), Department of Psychology



Tohme, Hill

A meme is a cultural idea, behavior, or symbol that is transmitted from person to person via written material, oral communication, rituals, or other mediums (Dawkins, 1989). Previous research has found that an emotion (e.g., disgust) can play a role in the retention and spreading of urban legends (Heath, Bell, & Sternberg, 2001). Research has also shown that negative information induces a stronger information processing response (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001). This suggests that negative information is more likely to be believed. We hypothesized that: (1) Urban legends will elicit specific emotional responses that are related to a person's willingness to spread, believe, and learn something from the legend, and (2) Individual

differences in the response pattern of participants to negative and positive legends will be associated with differences in their willingness to believe and spread legends. Participants included 149 UIS students (111 females, 38 males; mean age = 21.7 years) who read eight urban legends and recorded their emotional responses on a 7 point Likert-type scale. Results showed a significant positive correlation between an emotional response and willingness to spread for all eight legends. Significant positive and negative correlations were also found between perceived truthfulness of the legend and emotional responses. Correlation analyses with these variables suggested that negative emotional responses to legends have a stronger association with moral lessons and learning. A K-means cluster analysis grouped students in a 5-cluster solution and a series of ANOVAs were conducted finding significant differences in support of our second hypothesis.

Queering Migration



Jason Jenkins,* Departments of Political Science, Legal Studies (majors), and Women & Gender Studies (minor), and Hinda Seif (Mentor), Departments of Sociology & Anthropology and Women & Gender Studies

Undocumented LGBTIQ immigrant youth activism is an emerging research topic in social science. Queer Theory is a method of inquiry that challenges normative sexuality and its associated social identities and the hierarchies they form in our society. The purpose of this paper is to formulate an adaptation of Queer Theory to the norms and identities related to citizenship and immigration, and the ways in which the unique social position of queer undocumented immigrant youth make it possible to challenge the status quo. After articulating a Queer analysis of migration, the report examines methods and instances of activism that disrupt hegemonic norms of belonging.

Are the Linguistics of Media Discourse a Contributing Force in Perpetuating Victimization of Sexual Assault Perpetrators?



Michael Lotspeich,* Department of Political Science, and Amie Kincaid (Mentor), Department of Communication

With a plot line that sounds removed from an episode of *Friday Night Lights*, the 'Big Red Football' case propelled small-town Steubenville, Ohio into the national spotlight when a group of high school student-athletes dubbed the "rape crew" undressed, transported, photographed, and sexually assaulted an incapacitated young woman. These events, brought to light by a twelve-minute YouTube video featuring the waggish perpetrators describing Jane Doe with a malicious tone, started a national debate on the objectification of women in media. This research explores the two distinct reporting strategies of National Public Radio and Yahoo! News after the delinquent assailants were found guilty of molestation; specifically, my research will be analyzing the invisible technologies used to diminish power of the victim over assailants.

Back to the Past: A Look at Primary Sources in the Classroom



Brinkley

Zack Morrissey,* Department of Teacher Education (minor), **Chase Brinkley,*** Departments of History (major) and Teacher Education (minor), and **Brian B. Kahn (Mentor),** Department of Teacher Education

Last semester, students of TEP 438 Secondary Social Studies Methods were tasked with using primary sources from the Library of Congress website and completing different tasks concerning the interdisciplinary nature of social sciences. These modules focused on this interdisciplinary nature as well as how teacher candidates could gain a better understanding of the past and assist students develop critical thinking skills. *How did the learning modules that we completed tie into our preclinical observation time in a classroom?* The students of TEP 438 took their knowledge of primary sources and brought that into middle and high school classrooms. Our project looks at two different lesson plans and activities that were implemented in two classroom settings during the fall of 2013. One lesson took place in a local high school in 11th grade U.S. History, which used a diary from a woman living on a plantation in Georgia who experienced the horrors of total war through General Sherman's march to the sea during the Civil War. The other lesson took place in a local middle school. The primary sources used were photographs where students were tasked with making observations and conclusions through the sources that addressed the reforms established throughout the U.S. during the Progressive Era. The results of these teaching experiences will be shared.

The Illinois Enterprise Zone Program: How Well Has It Performed?



Michael Oyakojo* and Robert Blankenberger (Mentor), Department of Public Administration

The paper examined the impact of the Illinois Enterprise Zone program in relation to its set objectives. In 1982, the Illinois Enterprise Zone program was created as an economic revitalization tool to stimulate economic growth and revitalize neighborhoods in economically depressed areas through incentives that will boost investments, retain, and create additional jobs. The World Bank described the enterprise zone program as a development policy instrument to attract and enhance investment opportunities, job creation, and to create alternative pathways for development. Empirically, there are mixed results on the impact of enterprise zones on jobs, new business opportunities or retain existing businesses. Some scholars (Papke, 1991; Sridhar, 1999; and Moore, 2003) found that the implementation of enterprise zone programs led to the creation of new jobs with improvements in employment, but others (Boarnet & Bogart, 1996; Bondonio & Engberg, 2000; and Peters & Fischer, 2002) concluded that enterprise zone programs have no significant effect on employment, income level, or on capital expenditures. In 2012, 43 states in the US have implemented enterprise zone programs as an economic revitalization tool (The Civic Federation, 2012). Based on analyses using an array of analytical techniques (ordinary least square regression, survey, accounting ratio, and financial analysis), results indicate that the

performance of the program has not been commensurate with the level of investments. Effective program monitoring systems, a reliable feedback mechanism, and effective collaboration among various government departments and agencies are recommended for optimal performance of Illinois Enterprise zone program.

The Effect of Religious Coping on Academic Stress

Brittany Sievers,* Daniell Bennett,* Trenton Adams,* and Frances Shen (Mentor), Department of Psychology



Sievers, Bennett, Adams

Research indicates that religion/spirituality (R/S) is associated with greater psychological well-being among college students (Ellison & Fan, 2011; Luquis, Brelsford, & Rojas-Guyler, 2012; Web & Brewer, 2010). Given

the evidence that R/S can have positive effects among this population, it is likely that it may allow college students to better manage their academic stress. However, no research to date has examined if R/S impacts academic life or what aspects of it are related to academic well-being. The purpose of this study was to examine whether R/S engagement, coping and community support would significantly buffer the impact of academic stress on academic self-efficacy among college students. Through a websurvey, 26 students (17 male, 9 female) were recruited from student organizations at universities nationwide. Participants were asked to complete the Academic Self-Efficacy Scale (Zajacova, Lynch, & Espenshade, 2005), Daily Spiritual Experiences Scale (Underwood & Teresi, 2002), Multi-Faith Religious Support Scale (Bjorck & Maslim, 2011), Brief RCOPE (Pargament, Feuille, & Burdzy, 2011), and a demographics questionnaire. Preliminary analyses indicated that academic stress is positively correlated with religious/spiritual coping $r(26) = .457, p < .05$. However, there was not a significant relationship between the other R/S variables and academic stress or academic self-efficacy. Once data collection is completed in spring 2014, hierarchical regression analyses will also be conducted to test whether R/S engagement, coping and community support will moderate the impact of stress on self-efficacy in managing academic life.

Building a Diversity Task-Force, Building an Empowering Community



Roslyn Simmons-Lindsay,* Department of Human Services, **Shoon Lio and Tiffani Saunders (Mentors),** Department of Sociology & Anthropology

In Fall 2013, I have the unique opportunity to form a team consisting the superintendent and assistant superintendent of a central Illinois school district, UIS faculty and administrators to engage in a collaborative effort to understand the social climate of the schools in the district and to use the data to construct a more inclusive learning community. This paper provides a qualitative analysis of the formation of this diversity taskforce.

Pushing Toward Postsecondary: Racial/Ethnic Differences Among Factors Affecting College Success



Rachel Tohme,* Department of Human Development Counseling, and Carrie Switzer (Mentor), Department of Psychology

The racial/ethnic diversity of the United States is underrepresented in the nation's colleges and universities. It is important for educators to consider possible factors behind this disparity in order to discover better recruitment and retention strategies for minority students. Variables such as academic self-efficacy (Edman & Brazil, 2007; Zajacova, Lynch, & Espenshade, 2005), perceived barriers to education (McWhirter, 1997), vocational outcome expectations (Lent, Brown, & Hackett, 1994), and motivation to attend college (Phinney, Dennis, & Osorio, 2006) have all been implicated as important considerations regarding academic success in college. However, little research has examined differences between racial/ethnic groups among these factors. This study recruited 130 diverse college student participants from across the country to complete a websurvey comprised of questions measuring student motivation, academic self-efficacy, perceived educational barriers, and vocational outcome expectations. Results indicated significant differences in academic self-efficacy, motivation, and vocational outcome expectations across racial/ethnic groups, but no differences in educational barriers were found. Possible explanations for these between-group differences and implications for future research will be discussed.

Veteran and Non-Veteran College Student Perceptions and Experiences



Brianna Werner* and Frances Shen (Mentor), Department of Psychology

The purpose of this study is to examine microaggressions toward veteran students and identify veteran students' unique needs on college campuses. Existing research has shown that veteran students experience difficulty with transitioning into college, concentrating on their studies, and connecting with non-veteran peers (Zinger & Cohen, 2010). Therefore, more research is needed to understand the interactions between veteran students and non-veteran students, faculty and administrative staff, and to identify the resources necessary for veterans to overcome college barriers. A total of 19 non-veteran students (ages 18 to 51) and 9 veteran students (ages 26 to 60) participated in four separate non-veteran and veteran focus groups at a Midwestern university. Non-veteran student participants were asked to discuss their perceptions and experiences with veteran students on campus. Veteran student participants were asked to discuss their interactions with non-veteran students, faculty, and staff, experiences with stereotyping and discrimination, and accessibility of veteran student resources. Preliminary results indicated that non-veteran college student's perceptions of veteran students range from positive to negative, with some of these perceptions based on stereotypes. Similarly, veteran students reported having positive and negative interactions on campus, including experiences of microaggression from students, faculty, and staff. In addition, veteran students reported difficulty navigating campus resources such as financial aid.

Findings from this study provide insight into key aspects of veteran student college life and can have significant implications in enhancing veteran and non-veteran student interactions and informing institutions on how to better serve their veteran student population.

Salt and the Development of Civilizations, States and Empires: An Exploration



Sam Zielke* and Shoon Lio (Mentor), Department of Sociology & Anthropology

The origins and development of salt production is central to the development of complex societies, states and ancient empires (Adshead 1992; Flad et al 2005; Kurlansky 2001). Salt is an important aspect of human diet, society and economy. The production of salt had led to increased trade and population growth as well as the establishment of large human settlements. Flad et al (2005:12618) had argued that there are no known states have developed without a stable access to salt. This paper will outline an interdisciplinary framework that will analyze the role of salt in state formation and the emergence of ancient empires. Specifically, I will focus on salt production and the impact salt had in the development of ancient China as an empire.



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