

Student Arts & Research Symposium

April 12 & 13, 2012



Cover art:



Kelli Wilson, Senior Visual Arts Major, Dave Kube (Mentor), Visual Arts Department University of Illinois Springfield

The photograph on the front cover was created by capturing a reflection of light from the cover of a textbook. The photo plays with light by using an academic, everyday item to produce an abstracted art form. Though the book is not seen within the image, the photo would not be possible without the textbook as a tool.









am delighted to offer the Chancellor's support and endorsement of this 2012 Student Arts and Research Symposium. This important event, featuring a lacksquare 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,

Usanj. Koch Susan Koch, Chancellor

University of Illinois Springfield

It is my pleasure to welcome you to the 2012 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 2012 Symposium experience!

Lynn Pardie

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Interim Vice Chancellor for Academic Affairs & Provost





Holtz Lecture Bonnie Jo Campbell, M.F.A.

Bonnie Jo Campbell is the author of numerous books including, *American* Salvage, Q Road, and Once Upon a River. Her work has been awarded the Association of Writers & Writing Programs Prize for short fiction, the Pushcart Prize, and she was a finalist for the 2009 National Book Award in fiction. Ms. Campbell received her M.A. in Mathematics and her M.F.A. in Writing from Western Michigan University. She currently lives in Michigan and teaches writing in the low residency program at Pacific University in Oregon.



Keynote Speaker Cynthia Fisher, Ph.D.

Dr. Cynthia Fisher is a Professor of Psychology with appointments in the Linguistics Department and the Beckman Institute Cognitive Science Group at the University of Illinois at Urbana-Champaign. Her field of professional interest is language acquisition; she studies the beginnings of sentence comprehension by infants and toddlers. Dr. Fisher is a Fellow of the Association for Psychological Science, and has been a Visiting Scholar at the Institute of Linguistics, Academia Sinica in Taiwan, and at the Max Planck Institute for Psycholinguistics in the Netherlands. Dr. Fisher's presentation is titled, "Learning Words and Rules: The Early Development of Sentence Comprehension."



The StARS Committee would like to acknowledge the following people and organizations for supporting the 2012 symposium.

Faculty Mentors for their hard work and dedication to students' creative work and research: Donna Bussell, Meagan Cass, Hua Chen, Keenan Dungey, Kristina Dzara, Randolph Elble, Lynn Fisher, Sharon Graf, Shane Harris, Tena Helton, Stephen Johnson, Elizabeth Jones, Marc Klingshirn, Dave Kube, Roxanne Kurtz, Rebecca Landsberg, Ethan Lewis, Shoon Lio, John Martin, Amy McEuen, Mike Miller, Karen Mooney, Layne Morsch, Patrick Mullen, Daotai Nie, Patricia Oman, Julie Perino, Jonathan Perkins, Karen Pressley, Shuang-Yueh Pui, Dennis Ruez, Haley Seif, Frances Shen, Carrie Switzer, Missy Thibodeaux-Thompson, Lucia Vazquez, Abigail Walsh, and Larry Zettler.

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Friends of Brookens Library, and specifically to the John Holtz Memorial Lecture series, whose generous contribution made Bonnie Jo Campbell's appearance possible.

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UIS Speakers' Awards Committee for sponsoring Cynthia Fisher's Keynote Address and the Machinal play reading.

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Ray Schroeder, Associate Vice Chancellor for Online Learning, and the Center for Online Learning, Research, & Service for providing online student presenters with travel grants.

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Michelle Green, Derek Schnapp, & Blake Wood for assistance with marketing and publicity.

Monica Kroft, Provost's Office, for support services with the web page and registration form.

Carolyn Neitzke, Director of Conference Services, for coordination of the event space.

Undergraduate Research Steering Committee and StARS – Student Arts & Research Symposium Committee Members:

Meagan Cass Layne Morsch
Hei-Chi Chan Sheryl Reminger
Morgan Diffenderfer Dennis Ruez
Roxanne Kurtz Carrie Switzer
Rebecca Landsberg Amanda Winters



ARTS

Collections



Brad Balster* and Mike Miller (Mentor), Visual Arts Department University of Illinois Springfield

Ever since I was young, I have been collecting objects as a hobby. This interest has sparked my artwork to focus on the collections of objects from my own life.

These collections ranged from the valuable to the not so valuable objects, such as rare coins, stamps, to rocks plucked from underneath the backyard deck. It fascinates me to look at these objects today and think of what made these items worth collecting in my youth. The reason I hold on to these items today is different from when I collected them in the past. As of now, these items hold an inherent nostalgic value. Each item itself can trigger a memory of a person, day, or event that would otherwise be forgotten without that object. Each item represented in my work captures a memory much like a photograph works to capture a moment in time. Many of the images, which are silk screened, are represented much like the memory existed, not completely clear which requires the brain to fill in the rest. Many of our memories are vague, many times we can only recall the most important pieces, which is how I aim to represent my work. For me, the images of the collections are disconnected from the physical object and rooted more towards the memories triggered by them. My work contains many images, which are silk screened repeatedly, using layers on top of layers giving the idea of collecting whether it be memories or thoughts.

My Creative Process



Karen Boerema* and Shane Harris (Mentor), Visual Arts Department University of Illinois Springfield

The work that I had been doing was concentrated towards cutting cups and merging them with an opposite form creating a vast difference in size, shape,

and decorative theme. I used the connecting seams to create lines that increase the shift from one piece to the other. With these wonderful results, I wanted to find a more effective and efficient way to accomplish these results and the solution came in the form of my mold making class. This has shifted my creative process from all hand built, functional ceramic work to a combination of hand built and mold built as I still make some of the objects as well as all of the molds. The process of mold making is just a tool that I have learned to use to be more productive in what I do on a daily basis. I have been able to draw up a system in which I make each half of my molds interchangeable with any other half creating countless possible cup combinations. This requires a grid system and simple measurements yielding the most positive results that I have experienced to date. The detail that I am able to achieve is ten-fold when comparing it to the previous method of strictly hand building. I love these new tools that I have been given and I love the work that I am producing and I am looking forward to sharing that with you.

Machinal: A Reading



Sarah L. Collins* and Missy Thibodeaux-Thompson (Mentor), Theatre Program University of Illinois Springfield

For the symposium, I hope to organize and direct a reading of Sophie Treadwell's Machinal, first performed on Broadway in 1928. I wish to conduct

reading of this play and a subsequent discussion of its feminist elements, including how it is situated within the time of its first performance, 1928, and how it applies to our current climate of gender equality/ inequality. The play is also a solid base for a discussion of the death penalty and its ramifications and equivocations: was Helen wholly in the wrong? What are the consequences of executing a woman within the society of the play? Our own society? This play provides significant fodder for an enlightening discussion between the actors performing the reading, and audience members who come to watch the reading. I plan to invite members from the Legal Studies Department, the Women and Gender Studies Department, and perhaps also the Women's Center to also participate in the post-reading discussion. With the help of my faculty mentor, Missy Thibodeaux-Thompson, I will cast the reading early in the next semester, and rehearse with students, faculty, staff, and perhaps community members who become involved to ensure the performance quality of the reading for the symposium. The reading will require stools and music stands for the readers, and could easily be presented in either the Studio Theatre, or perhaps even Brookens Auditorium. I will also prepare a list of questions to provoke discussion on the play and its cultural, political, and psychological significance both historically and currently.

Machinal Cast - UIS Students: Kevin Brownell, Carson Buss, Erin Clinch, Sarah Collins, Blake Detherage, Natalie Noble, Dexter Overall, Jillian Risinger, Sarah Steinhour & Megan Waldschmidt; UIS Alumni: Ben Beams & Tom Hutchison; Community Members: Susan Jeffers & Liam Schaver

Emoticons



Nick Davis* and Mike Miller (Mentor), Visual Arts Department University of Illinois Springfield

My artwork is all about emotion; what we deal with on a daily basis and what events in our lives change who we are and alter what is to come. I find it to be a

dynamic relationship to juxtapose elements together and to see how many ways they can interact and to see what emotions surface in the process. These elements can be themes ranging from cultures, technology, relationships, forms of media, psychology, forms of expression, and random assortments of objects. It is very important for me to see the reaction and emotion on people's faces when they view my art because it is both the driving force and the intent of my art. It is my mission to have my work stand on its own, but also relate to any and every individual that walks by it because we all have our own problems, stories, memories, and perplexities to deal with. I want to be able to use every emotion to my advantage; to be able to make you think of the short comings of your own life in one piece and make you laugh at a memory that evolved out of another. I use a camera as the main tool because it is the most literal of the art mediums; it is very intentional and elicits the essence of emotion. I also use Photoshop as a tool that accentuates the connection of the elements found in my work.

Minds in Motion



Skan Jolly* and Mike Miller (Mentor), Visual Arts Department University of Illinois Springfield

Our thoughts, memories, and regrets exist in a realm of fluid perspective. What we do or don't do now we may be thankful for today and horrified by tomorrow.

The way we act and identify ourselves is incessantly fluctuating. A virtual ebb and flow of interaction, education, and understanding. As we evolve and our perceptions transform, the question I ask is; does our reality, past, present, and future, change? Seeing as though our reality stands unchecked to everything except for it's self, I am intrigued as to the intricacies of the process in which we construct, modify, and repair our reality. The evaluations of our past are never static, therefore are future will always be unknown. The events of our past may not directly change, however, considering those events only exist in the history of our reality, which is subject to the persuasion of our perspective, are we ultimately the authors of our own reality? This body of work is meant to reflect the ambiguous nature of our perceptions and inevitably the power they have to define our reality.

Very rarely do we associate body language with our thoughts and memories; however, I can't help but ask the question: "If our thoughts had a physical shape, how would they move? How would they interact?" It is with this series of sculptures I hope to put a physical likeness to the inner thoughts many of us know so well, and to truly capture the power our mind has over the perception of our reality.

Figure in Clay



Sara Joseph* and Mike Miller (Mentor), Visual Arts Department University of Illinois Springfield

Since I started working with clay, I have been drawn to creating sculptures that deal with use of the human figure. Something about sculpting the different parts

that create a person has drawn me into creating a character that I sculpt. I also have realized I am specifically drawn to making the face, hands and feet of figures more than anything else, which is where I focus the detail work in my sculptures. I am drawn to create work that translates to the viewer a sense of unease. I am intrigued by human behaviors and what makes people tick, which is an inspiration to my work. I also am inspired by what is conventionally ugly and that I also portray through my work through various techniques to bring life to my figures.

Urban Surrealism



Pablo Ramos-Nieves* and Mike Miller (Mentor), Visual Arts Department University of Illinois Springfield

The content in my works reflect on the mysteries of what a door holds: it's an adventure to explore unfamiliar limitations and create a memoir of a

particular time of growth. I consider my works of art a mixture of urban influences and surrealism - always eclectic. Constructing from destruction is an important strategy for me. I use found objects that

can be seen and used everyday. I incorporate paint into all of my works and then assemble plywood and other materials, to construct various installations. Assimilating diverse materials into these environments transforms a utopian fairytale into an ominous landscape. I hope for the individuals who walk into these environments to be able to react whimsically, as a child would. Currently, am most influenced by one particular childhood film: Alice in Wonderland. This environment will include the famous Mad Hatter and his Mad Tea Party with riddles and beverages. This work explores the illusion of gateway-portals, doors that lead an individual from the real world into a dream realm or vice versa. It is an erotic-voluptuous fantasy escape.

Musical Performance

11:30-12:30 PAC Lobby Performance by UIS Musicians (Subject to change)

Gaelic Offering

Catherine McMichael

1. Rose Cottage

Elizabeth Heady, Anna Dang,* Meghan Lindstrom,* flutes; Andrew Dambrauskas,* oboe

Rule Brittania Arne

Diamond State Rag

Evans

Kyle Pratt,* Bruce Underwood, Gary Kerr, alto saxophones; Gary Kerr, Jared Osland,* tenor saxophones

Royal Fireworks Suite

Handel; Arr. Thomas

- 1. Overture
- 2. Allegro
- 3. Bouree
- 4. La Rejouissance
- 5. Menuet 1 and 2

Byrd Davis, Juan Gonzalez,* trumpets; David Dang,* euphonium; David Miller,* tuba

Poco Adagio

Bimboni

Allegro

Telemann

Byrd Davis, Sharon Graf, trumpets

Trio Sonata No. 1

Abel

Selections from Music for Three

Abigail Walsh, flute; Sharon Graf, violin; Marque Haupert, cello



Andrew Dambrauskas,* Elizabeth Heady, Anna Dang,* Meghan Lindstrom*



Kyle Pratt,* Jared Osland*



David Dang,* David Miller,* Juan Gonzalez,* Byrd Davis

Musical Performance

3:00 TV Studio Performance by UIS Musicians (Subject to change)

Eine Kleine Nachtmusik

Mozart; adapt. Mazzini

- 1. Allegro
- 2. Romance

Peacherine Rag

Scott Joplin

Kaleb Fowler,* John Spurgeon,* Amy Zepp, Laura Drennan, clarinets

Gaelic Offering

Catherine McMichael

Rose Cottage

Elizabeth Heady, Anna Dang,* Meghan Lindstrom,* flutes; Andrew Dambrauskas,* oboe

Royal Fireworks Suite

Handel; Arr. Thomas

- 1. Overture
- 2. Allegro
- 3. Bouree
- 4. La Rejouissance
- 5. Menuet 1 and 2

Byrd Davis, Juan Gonzalez,* trumpets; David Dang,* euphonium; David Miller,* tuba

London Trio No. 1 in C Major

Haydn

- 1. Allegro Moderato
- 2. Andante
- 3. Vivace

Josh Eastby,* Maithili Pan,* violins; Abigail Walsh, flute; Elizabeth Jones, euphonium

Rule Brittania Arne

Diamond State Rag

Evans

Kyle Pratt,* Bruce Underwood, alto saxophones; Gary Kerr, Jared Osland,* tenor saxophones

Poco Adagio Bimboni

Allegro Telemann

Byrd Davis, Sharon Graf, trumpets

Suite for Flute and Piano

Bolling

5. Irlandaise

Abigail Walsh, flute; Kate Reynolds,* piano; Lynn Fisher, cello

Brief Intermission

Trio Sonata No. 1 Abel

Selections from Music for Three

Abigail Walsh, flute; Sharon Graf, violin; Marque Haupert, cello

Trio Haydn

Sharon Graf, violin; Jonathan Perkins, viola; Lynn Fisher, cello

Fantasy for Horn, op.88

Malcolm Arnold

Elizabeth Jones, euphonium

Sonata in B flat Boismortier

- 1. Gravement
- 2. Lentemente
- 3. Gavotte en Rondeau

Kaitlin Kasper,* euphonium; Andy VandeVoort, trombone; Stu Farris, tuba

Arioso JS Bach

La Cumparsita M. Rodriguez

Canzon 1 Paul Peuerl

When I'm Sixty Four Lennon and McCartney

Just for Fun Steven Mattos

Just a Closer Walk with Thee Arranged by Don Gillis

Byrd Davis, Aaron Duncan, trumpets; Jan Marie Arnold, horn; Matt Traeger, trombone; Stu Farris, tuba



Laura Drennan, Kaleb Fowler* Amy Zepp, John Spurgeon*



Stu Farris, Andy VandeVoort, Kaitlin Kasper*



Byrd Davis, Sharon Graf



HUMANITIES

Are Feminism and Multiculturalism Opposed?



Matt Bernico* and Roxanne Kurtz (Mentor), Philosophy Department University of Illinois Springfield

This paper focuses on the subject of Susan Okin's essay, Is Multicultrualism Bad for Women, as well Will Kymlicka's response in his paper Liberal Complacencies.

The considerations from both papers are taken into account and it is argued that Okin's concerns for women's rights should take precedence over considerations for group rights. Due to the pervasiveness of patriarchy in both minority and majority cultures, Kymlicka cannot effectively see and understand the oppression women in ethno-cultural groups may experience. Due to the overall flaws in liberal theory and Kymlicka's theory to account for oppression, a new special right must be assigned to women and others who are explicitly and implicitly oppressed. This new special right applies to women and any others who face oppression in culture and seeks to give them an outlet to give a voice to their suffering. The new group right is called the right to unrepressed dialogue and seeks to give real political power to change practices that oppress women and other internal minorities of ethno-cultural groups.

The Journal of Timothy Coffin Osborn: The Hidden Discoveries of the Life of a Forty-Niner



Lilly Chen* and Tena Helton (Mentor), **English Department** University of Illinois Springfield

Osborn's daily journal serves as a testimony of his experiences and reflections while he is working and living in the southern mining region of California

during the Gold Rush. The English-Chinese translation of 50 words is the essential core of Osborn's journal, through which are infused ideologies regarding class and race. His writing style and use of intertexuality embody influential nineteenth-century literary and cultural tropes and political agendas about the "other," following the current trends of his day. Moreover, Osborn's personality and his observations transform his own thoughts into his journal, crafting it as a historical, social, and cultural text.

Conversations on Technology in the Writing Classroom: A Discourse Analysis



Kristen Chenoweth* and Donna Bussell (Mentor), English Department University of Illinois Springfield

Technology usage in the classroom continues to be a popular and pressing matter in higher education as programs evolve to meet the needs and expectations

of an increasingly technology-savvy student population. This study analyzes the discourse on the use of technology in the teaching of rhetoric and writing and seeks to explore how faculty and writing program administrators negotiate the constantly shifting paradigms and changes in pedagogies in order to facilitate student learning. The educator-focused analysis will consider how the discourse contributes to policy formation and curriculum changes and may suggest best practices for future expansion and incorporation of technology in the teaching of writing.

One Urn, Three Poets: Reading Proleptically to Make New Meaning of Keats' "Ode on a Grecian Urn"



Kristen Chenoweth* and Ethan Lewis (Mentor), English Department University of Illinois Springfield

Keats' "Ode on a Grecian Urn" has taunted many a scholar over the years with its enigmatic statement; "Beauty is truth, truth beauty." Though Keats'

ultimate intention behind the urn's message may never be known, scholars cannot help but seek ways to make meaning of the message for themselves and for readers. I suggest a method of reading Keats' "Ode on a Grecian Urn" in relationship to two poems written by poets who preceded Keats: Christopher Marlowe's "The Passionate Shepherd to His Love," and Sir Walter Raleigh's own response to that poem, "The Nymph's Reply to the Shepherd." By exploring the two earlier poets' works proleptically, it is possible to entertain the fiction that Keats' poem preceded the earlier poems in time. The fiction allows Marlowe and Raleigh's works to transform into responses to the very questions Keats' narrator poses to the urn, as well as interpretations of urn's message itself. In doing so, new interpretations of the urn's seemingly undecipherable message come to the surface, offering a meaning that had not previously existed. Once entertained and explored the new interpretation remains intact even when the fictional sequencing of poems is removed. With the new interpretation at hand each of the three poems may be read in chronological order, providing further insight to the poem's origin, purpose, and meaning.

The Southern Husband Outwitted by His Union Wife: A Critical Introduction



Sarah L. Collins* and Tena Helton (Mentor), English Department University of Illinois Springfield

Kate Plake's *The Southern Husband Outwitted by His Union Wife* provides a personal saga of torture, escape, and espionage before and during the Civil

War, as well as her struggle to publish and retain copyright of her own story. Reading Plake provides a framework for reading the genre of autobiography itself. Historical context is important to understanding the significance of her narrative and of the genre, including her participation in the Wide Awake Movement, her work as a spy, her connection to the burgeoning Women's Rights movement in the years surrounding the Civil War, and the copyright law problems and their consequences on authorship in the Antebellum to Postbellum eras. Plake also draws upon conventions of antebellum autobiographies in order to comment upon the political, social, and cultural issues of the time. The subgenres she utilizes include domestic narratives, panic fiction, the cult of motherhood, and even captivity/slave narratives, which indicate for my audience where the tropes lie in Plake's text, and how she both uses them for emphasis and to express her marginalized standpoint. By contextualizing Kate Plake's life, I conclude that her voice speaks out against the ideologies formed through the culture's path unto its "present" position, making the text a significant aid in understanding the growth of the women's rights movement, oppressed voices throughout history, and also the face of America for future generations.

Under the Sun: The Swan of Mantua in the Shadow of Milton—Search for the Gotterfunken



A certain sect of Miltonic scholarship has often focused upon his incorporation of classical texts into

his *magnus opus*, *Paradise Lost*. One of the primary texts most evident in the lines of *Paradise Lost*, and in its scholarship, is Vergil's *Aeneid*. Much of the scholarly work in extant covers the relationship Milton's text shares with Vergil's; the vast majority of these texts, however, seem to be limited with merely providing examples of Milton using Vergil. During research on this topic, I came in upon a new understanding of how one may read these two epics comparatively. In this paper, I argue that the relationship between these two works is a dual action pathway: Milton borrowing from Vergil to complete his own work and Vergil's work being completed by finding its consummation in Milton's. Additionally, I also argue that a term I defined as *Gotterfunken* is both the cause and the result of the text's correlation.

"Common Law Wife": A Creative Writing Reading



Lacey Jean Frye* and Meagan Cass (Mentor), English Department University of Illinois Springfield

"Common Law Wife" embodies the writer's, and thus the protagonist's, artistic voice through the study of vernacular patterns and slang found within smaller,

country communities, and the way in which society associates certain accents and patterns of speech with a certain level of intellect. Influenced by where she is from, by her roots, the protagonist weaves a tale of wonderment and escape which leaves the reader questioning if her escape is something tangible, or something she uses to keep a level of sanity within the birdcage of a world that engulfs her. This theme of place and misconceptions of protection hits close to UIS, as it delves into the hills and hollers of the Midwest and ultimately, into the psyche of the female role residing in such a tiny, two-buck town. Along with local flavor, the tale touches on aspects of life from the protagonist's point of view—the female role searching for a true sense of self-worth and identity within the Midwestern region.

Masters and *The Sangamon*Ashleigh Hall* and Patricia Oman (Mentor), English Department University of Illinois Springfield

Edgar Lee Masters is the author of twelve plays, twenty-one books of poetry, six novels, and six biographies—not to mention countless essays. Of all of his works, he is most well-known for *Spoon River Anthology*, a collection of epitaphs as told by the dead themselves. Nearly twenty-seven years later, he wrote a novel titled *The Sangamon*. Both novels are about the lives of the dead as told from the vantage of death itself. In *Spoon River*, the dead tell their own stories, whereas in *The Sangamon*, Masters is the narrator telling the stories. The characters are mostly the same in both novels. In my project, I plan on addressing the versatility of place in both novels. For example, *Spoon River* could have taken place in any small, rural American town. *The Sangamon* seems to focus more on location, more specifically, Menard County and Petersburg. My goal is to read and analyze the book in conjunction with Spoon River and discuss the importance (or unimportance) of location between the two books.

The Grapes of Wrath and the Wrath of Industrialism

Ashley Head* and Patricia Oman (Mentor), English Department University of Illinois Springfield

John Steinbeck's 1939 novel *The Grapes of Wrath* is linked to California like all of his other works. This specific novel is told around the time of the Great Depression and shows how industrialism negatively impacts the lives of those within the book. The book is very reliant on the struggle of the job market and therefore the struggle to survive at all. I am going to take a look at *The Grapes of Wrath* in comparison to the 1930 defense of Southern regionalism *I'll Take My Stand*. I want to look at how industrialism is portrayed within the novel, and make the

argument that industrialism has had a negative impact on American society. People are flocking to government owned camps to find jobs, but the amount of jobs had been lessened from the acts of industrialism. This is exactly what the writers of *I'll Take My Stand* wrote about, claiming that the way the south lived was the best thing for the American people. Steinbeck's novel provides us with a focus on the unstable job market, as well as the way new industrial inventions created job instability.

Tales of a Wayside Inn: "Paul Revere's Ride" and New England Regional Identity Joan Martin* and Patricia Oman (Mentor), English Department University of Illinois Springfield

The words "Listen, my children and you shall hear" constitute a prompt for recitation that the American citizenry would likely find hard to resist, as Longfellow's classic 1863 poem, "The Landlord's Tale," commonly referred to as "Paul Revere's Ride," is a mainstay of American public school curricula. While a celebrated author nationally and internationally, Longfellow's name is rarely mentioned in the critical discourse concerning regionalist literature, and the poem offers an opportunity to examine the tensions between the local and the universal, and Longfellow's place in New England regional literature. My tentative thesis is that by embedding particular references to significant personalities, locations, and landmarks within the poem, Longfellow historically documents Paul Revere, the legend of his famous ride, and his native New England region as symbols of regional and national ideals. The lens of 20th century southern regionalism, with its reactionary stance against the canon of traditional Western literature, merits reconsideration of Longfellow's 19th century work as regionalist, particularly in the comparative analysis of "Paul Revere's Ride" <i> and its prologue, "The Wayside Inn," that describe a unique, local New England region tightly bound to its Western cultural roots that Longfellow aspires to equate with a national identity.

Short Fiction Reading-Untitled (Weeping Willow)



Kati Maseman* and Meagan Cass (Mentor), Communication and English Departments University of Illinois Springfield

I will present a short fiction piece revolving around themes of young love, broken trust and breakups. My

story will focus setting on a willow tree and a smaller rural town in the Mid-West in the late 50s/ early 60s.

Fiction Reading: Themes and Issues Surrounding Accidental Death of a Friend and Parental Abuse

Tyler D. McHaley* and Meagan Cass (Mentor), English Department University of Illinois Springfield

I will present an original short story that deals with the themes of mortality and identity for a young boy in 1960s rural America as well as socialization in a hostile and negative world.

"Coming Alive to Myself": A Creative Writing Reading

Taylor Moore* and Julie Perino (Mentor), English Department University of Illinois Springfield

"Coming Alive to Myself" is an essay in which I use the genre of personal narrative to describe a time in my life when I learned to deal with the overwhelming responsibilities and insecurities that al teenagers inevitably work through. The story's depth derives from moving beyond the average stage of teenage awkwardness into the responsibilities of dealing with a depressed and suicidal best friend and the trauma created from having an abusive boyfriend. Both of these people impacted me greatly, worsening of my already weak self-esteem. The narrative describes the toll this took on my everyday life and how I ultimately was brought to the point of seeking help for depression. Through the narrative and my analysis of this experience, I show my peers my ability to learn from negative experiences and to help others connect with my experiences. To do this, I conclude by showing how suicide is a prevalent tragedy in society and attempt to bring awareness to the subject through my brief account of how it directly affected my own life.

Southern Distinction Ends in Massacre of Teens: The Regional Demon in *The Texas Chainsaw Massacre*



Rachel Neudahl* and Patricia Oman (Mentor), English Department University of Illinois Springfield

The Texas Chainsaw Massacre, directed by Marcus Nispel, portrays the horrors of a group of teenage friends who cruise into a minuscule Texas town and

soon find themselves within the grasp of a chainsaw wielding murderer. It's very obvious that the seemingly suburban teens and the town's inhabitants are from two very different cultures: one that celebrates love of music, weed, and friendship (but not so much loyalty) and another that feeds on secrecy, loyalty, and murder. I would like to explore how the differences between these two groups (cultures) can be traced back to regionalist differences. The lost teenagers seem to represent universal nationalism while the inhabitants of the small town represent the regional, only in this case the rural area isn't described as quaint and comfortable but brutal and terrifying. In order to protect nationalism, regionalism is demonized. I want to compare this film with the original version directed by Tobe Hooper to see how and if

continured on page 14





place is portrayed differently and discover if this has an effect on the meaning of the work. A very broad and tentative thesis would be the horrid occurrences that take place in this Texas town are shaped by the view that the people within that town hold of themselves. They find themselves to be different and separate from this group of intruding teens, so in order to preserve their life style they must demolish the ones who represent a different way of life.

Hometown Memories Are More Than Skin Deep: Gothic Place in Stephen King's IT Rachel Pinkston* and Patricia Oman (Mentor), English Department University of Illinois Springfield

I am going to be analyzing Stephen King's novel *IT*. In this work King explores the magnetism that a hometown has on its inhabitants. I plan on doing this by looking at the novel through the lens of gothic studies, using Bernice Murphy's 2009 book *The American Gothic in American Popular Culture* as a methodological model. This book approaches gothic studies from a cultural studies approach and shows that even in the American dream of the suburb evils lurk just below the surface and represent particular societal fears. King shows this with a physical/ metaphysical being called by many names that eats the children of the small Maine town Derry every twenty-seven years. The creature, called *IT*, is a shape shifter and embodies adult worry that their children will leave them all too soon. *IT* does this by murdering children once every generation thus culling the herd and bringing to light a parent's worry about the effect of war on their children. I thus argue that King uses the place-based gothic tradition to critique U.S. war policies.

Writing a Portfolio, Building a Website, Adapting to Genre Expectations



Katrina Salvador* and Julie Perino (Mentor), English Department University of Illinois Springfield

To pass English 101, students create a website that displays the projects that they wrote over the course of the semester. The process of creating the portfolio

involves revising four projects, a narrative, a blog article, an article for National Geographic, and an image analysis for an academic conference. It also involves building a website using Google Sites. For my narrative, I wrote about recovering after a catastrophic event. I told my story of reclaiming an activity I loved after a terrible injury. In my blog, I discussed the role of appearance and attractiveness in the workplace, which reveals how "survival of the fittest" functions in the workplace because attractive people have been proven to have the more prominent positions in the work place. For my National Geographic article, I observed students in my chemistry laboratory and analyzed how the scientific method works in and outside of the lab. My image analysis analyzed how the World War II advertisement, "Rosie the Riveter," changed the American lifestyle and boosted the economy through women's contribution to the war effort. The final aspect of revising for the portfolio consisted of arguing and analyzing the strengths and features of the four projects. The process of writing and revising these projects and creating the website required conducting different levels of scholarly research and adapting paragraph styles and voice to meet genre expectations.

I'll Take My Stand in Gone with the Wind



Ashley Stevens* and Patricia Oman (Mentor), English Department University of Illinois Springfield

In the 1939 MGM film *Gone with the Wind*, we get to know Scarlett O'Hara, a pretty southern belle who is used to the old and slow southern ways. However,

things change once the south engages in a civil war with the north and she loses everything she has known. After the war ends, we see the arrival of carpetbaggers and industrialization on Scarlett's own doorstep. In I'll Take My Stand, a book on Southern regionalism published in 1930, it is obvious that the writers feel that industrialization was a bad thing for the south and that they should not forget its agrarian way of life. For my final project, I want to address the problems of Southern identity and economy in the 1930s as it is revealed in both the movie and the text I'll Take My Stand. For my thesis, I want to argue that the characters in this film seem to side with Ransom in I'll Take My Stand, showing their frustration and anxiety with industrialization, but the film makes it a point to show that life became easier after the Southern Agrarians gave in to the change and decided to join the Northerners in hopes to beat them in their own game. I will also compare the film to the 1936 novel to show that the while the film is sympathetic toward the Southern way of life, it is ultimately designed for a national audience.

"Shared Reading: Poetry and the Broadsheet": A Creative Writing Presentation



John Tienken* and Meagan Cass (Mentor), English Department University of Illinois Springfield

"Shared Reading: Poetry and the Broadsheet" is a creative work which attempts to realize the potential of place in the experience of poetry. The work

includes two prose poems and their representation on broadsheets. The unnamed protagonists of the works live, breathe, tour, discover, and remember cities in their past; just as importantly they remember the people and the places that made the memories endure. Throughout the piece, place is as an essential a character as the protagonists themselves providing at times conflict, hope, desire, longing and peace. The broadsheet is an important element of the theme of place incorporated in the works. For centuries, broadsheets were placed in village commons and nailed to city halls. They were royal proclamations, community announcements, reprinting of popular speeches, ballads and songs. The Declaration of Independence was first read and seen on broadsheets throughout colonial America, and the Emancipation Proclamation was shared in this way as well. Broadsheets can also be large-scale representations prose poems that use images and texts to evoke the theme of poem, and importantly allow multiple people to experience the poem at once. With the broadsheet, the poet can create a poetical public sphere of shared engagement with the emotions, ideas, and themes embodied in a poem.

The Hunger Games and the Rejection of Regionalism

Conor Tinch* and Patricia Oman (Mentor), English Department University of Illinois Springfield

The Hunger Games are set in a dystopic future where the capitol of the United States has been moved to the Rocky Mountains and rules over twelve separate districts, previously thirteen. The capitol and its citizens live in lavish luxury while the citizens of the districts live under martial law and must offer their names into a deadly lottery just to get enough food for the year. The lottery determines who from each district will fight to the death in a televised arena which all are forced to watch, a relationship that demonstrates that the "city" has become increasingly out of touch with the "country." The revolution of the districts in *The Hunger Games* could easily be seen as a representation of increasing globalization, where slowly but surely, information is beginning to work its way into the populace around the world, despite attempts at censorship from the few countries that control the media. The contrast of the two places in the novel and the districts' push to the capitol directly reflects the fight for an increased flow of information and the rejection of the regionalism that is attempted to be imposed on the United States by political and corporate interests. The paper will look at the series as a whole through the views of Judith Fetterly and Marjorie Pryse's work on regionalism, especially their 2003 book Writing Out of Place.

On Liberal Multiculturalism and Feminism



Spencer Wright* and Roxanne Kurtz (Mentor), Philosophy Department University of Illinois Springfield

This paper examines the tension between liberal multiculturalism as the political approach to provide

external protection to minority cultures and the feminist critique that this will inevitably disparage the women in those minority cultures that are patriarchal. I focus on two formulations of multiculturalism by Will Kymlicka (1989) and Chandra Kukathas (1992) respectively, and a feminist critique by Susan Okin (1999). My goal is to outline the way in which the similar goals of feminism and multiculturalism can be consolidated under a move towards individual rights. My position is that group rights should be valued only inasmuch as they contribute to individual rights; by focusing primarily on the empowerment of the individuals within minority cultures, we can avoid Okin's worries of supporting the oppression of women. Taking influence from the essentialist approach to human nature of Martha Nussbaum (1992), I provide a brief overview of what individual empowerment will require. When the individuals within a minority culture are sufficiently empowered, then feminist concerns should be satisfied regardless of the traditions within the culture and there should be no worry about providing external protections to that group.



Pseudokinase *Trb3* exerts an antiproliferative effect and promotes a G2/M phase arrest in prostate cancer cell line, PC-3



Djamilatou Adom* and Daotai Nie (Mentor), Department of Medical Microbiology, Immunology and Cell Biology Southern Illinois University School of Medicine

Tribble-3 (Trb3) is a novel serine/threonine protein kinase that lacks any catalytic activity, thus its classification as a pseudokinase. Studies reported that Trb3 can regulate different physiological processes including its involvement in cellular development, stress-mediated apoptosis and negative regulation of the prosurvival proteins Akt and NF-KB. Furthermore, Trb3 is upregulated in different types of cancer, where its role still remains poorly characterized. The goal of this study is to decipher the biological function of Trb3 in cancer, including the molecular mechanism of action. To determine the role of Trb3, endogenous Trb3 was depleted using small hairpin RNAs. Conversely, Trb3 was ectopically overexpressed in prostate cancer cells using CMV-driven Trb3 expression vector. Subsequent effects of Trb3 ectopic expression or depletion on cell proliferation, cell cycle progression, and colony formation were determined. Depletion of the endogenous Trb3 protein by short hairpin RNAs resulted in a higher proliferation rate and higher colony formation ability in prostate cancer DU145 cells. This effect was due to increasing levels of proliferation protein KI67 and activation of mitotic phosphatase Cdc25C. Conversely, Trb3 overexpression had antiproliferative effect, inhibited colony formation ability and promoted a G2/M phase arrest in prostate cancer PC-3 cells. More importantly, Trb3 overexpression inhibited tumor growth in vivo. Endogenous Trb3 levels were induced by different stress inducers including rotenone, an inhibitor of the electron transport chain. Rotenone treatment reduced cell viability, reduced mitochondrial membrane potential and promoted apoptosis in prostate cancer cells. Our results suggest that Trb3 is activated in the primary tumor to prevent tumor growth by promoting cell cycle arrest.

Carbon and Nitrogen Storage in Natural Illinois Wetlands: Comparing Marshes and Sedge Meadows



Ben Briddell* and Hua Chen (Mentor), Biology Department University of Illinois Springfield

Wetland ecosystems have been identified as natural sinks for carbon (C) and nitrogen (N) due to their high productivity and low decomposition rates over

long durations. However, few studies have addressed the long-term effects of plant diversity on C and N storage in natural wetlands. The overall goal of this study is to determine and compare C and N storage in natural marshes and sedge meadows in Illinois. The objectives of this study are to determine the aboveground and belowground C and N storage capacities for two wetland types, estimate which type has a better storage ability, and compare plant diversity between the types to determine if this trait affects storage. Two sites for each type were used for sampling. 0-20 and 20-40cm-deep soil samples were collected using a soil corer from five one-meter by one-meter subplots arranged along a fifty-meter transect at each site. Plant samples were also collected from these plots and a survey of species abundance within each plot was conducted. A CHN analyzer is used to determine the C and N concentrations of the soil and plant samples. The marsh and sedge meadow types will be compared using C and N values for two depths of soil, roots, as well as the various identified species collected from each site. The plant species diversity for each wetland site will be estimated using Shannon's diversity index. This research study is currently in progress and the final results will be discussed at a later

The Effect of Herbivory on Agastache foeniculum, Liatris aspera and Tradescantia bracteata Establishment in a Recently Reconstructed Tallgrass Prairie



Morgan Diffenderfer* and Amy McEuen (Mentor), Biology Department University of Illinois Springfield

Using rabbit exclosures, the effect of herbivory on seedling survival of *Agastache foeniculum* (Anise Hyssop), *Liatris aspera* (Rough Blazingstar) and

Tradescantia bracteata (Prairie Spiderwort) at Emiquon Field Station was measured. The site is home to a recently restored prairie where not all of the original native plants that were seeded have established. Seedlings of these three species were planted spring 2011 to see if such plantings could increase their abundance. In total, 60 of each species were planted for a total of 180 seedling plugs. Rabbit herbivory was also measured to monitor the effect on establishment of each species. Overall, rabbit herbivory was not a factor in recruitment of the species with no rabbit herbivory observed on any of the three species. Liatris aspera had high mortality with only 3 seedlings out of 60 (5%) surviving through the Oct 21, 2011 census through production of clonal stems. Tradescantia bracteata showed strong clonal recruitment (86.7% of the plants produced colonies) in the study sites, even though 85% of the original stems had died back. Agastache foeniculum also had high survival with 60% of the seedlings surviving through

October. There was a large amount of insect herbivory on all seedlings which could have been a factor in decreasing the recruitment of *Agastache foeniculum* and *Liatris aspera*. Drought conditions also may have contributed to poor recruitment. We suggest that spreading seedling planting across multiple years might be the most successful management strategy to minimize losses from seedling plantings.

The Radial Velocity of Epsilon Aurigae



Cheng Fan* and John Martin (Mentor), Astronomy/Physics Department University of Illinois Springfield

In this research project I take a look at radial velocity of the star Epsilon Aurigae. The radial velocity can lead to the measurement of the mass of the star as

well as the mass of the unknown body that eclipses it roughly every thirty years. In order to measure the shift of the spectral lines of the star, we calibrated the wavelength scale by using a known spectrum of Mercury. After calibrating the wavelength scale, the wavelength shift of the spectrum could be measuring using spectral absorption lines of Ni, Ti, and Fe (presumably formed in the star's atmosphere) in order to measure the Doppler shift of the star relative to the Sun. The results showed that for both the Fe and Ti the correction in shift is very accurate since their standard deviation was 0.0453 nm and 0.0430 nm respectively from known values. The N wavelengths are not as accurate as the other two but still within reasonable error range as the standard deviations were 0.0836 nm, 0.0800 nm, and 0.0814 nm from known values.

Separation and Identification of Components from *Juniperus sabina*Extract that Negatively Impact the Growth and Survival of HeLa Cells



Mark Frakes,* Layne Morsch,¹ Rebecca Landsberg,² and Lucia Vazquez² ¹Chemistry Department, University of Illinois Springfield ²Biology Department, University of Illinois Springfield

In previous studies, Juniperussabina extract demonstrated negative effects on the growth of cancerous human cell lines. However, little is known about the active component or components within the extract, which was the focus of this study. Two samples of J. sabina extract were obtained using different organic solvents: acetone and methanol. Each extract was separated into fractions using flash affinity chromatography. A sample of each fraction in ethanol was placed in separate wells containing HeLa cells and incubated until the cells responded. Approximately four hours after adding the extract, the experiment was stopped. After analyzing each well, it was determined several fractions from the acetone extract caused significant damaging effects on the growth and survival of the HeLa cells, destroying nearly 100% of the cells from the well. The active fractions were further separated using flash chromatography and preparatory thin layer chromatography. The activity of these fractions will continue to be analyzed until the active compound(s) can be isolated and identified.

Latrine Site Selection and Diet Composition of River Otters (*Lontra canadensis*) in a Restored Illinois Floodplain



Gregory R. Fretueg* and Dennis R. Ruez, Jr. (Mentor), Environmental Studies Department
University of Illinois Springfield

The North American river otter (*Lontra canadensis*) is a semi-aquatic carnivorous mammal of the

Mustelidae. The objectives of this study were to determine the habitat features associated with latrine sites and diet composition of river otters along the Illinois River with the focus area being the Emiquon National Wildlife Refuge and the Nature Conservancy's Emiquon Preserve near Lewistown, Fulton County, Illinois. To examine the habitat associated with river otter latrines at Emiquon the shorelines and levees within the study area were examined in search of river otter scat and other otter activity signs. A site was considered a latrine site if there are at least 2 feces in close proximity. The locations of discovered latrines were marked with GPS and the location habitat characteristics were documented. Habitat characteristics documented included cover type, canopy cover, beaver activity, and the distance from the center of latrines to water bodies. Scat discovered was collected for dissection to identify bone fragments, scales, etc. Trail cameras were also utilized to document the presence of otters at latrines. Fifteen latrine sites were discovered across the study area. These latrines are located on the grassy levees of the Refuge and Preserve. The majority of latrines are associated with levee crossover paths created by otters. Five hundred and seven scat samples were collected from May 28, 2011 to September 30, 2011. Crayfish and fish were the dominate prey in the study area. Otters were also captured on trail cameras on thirteen different nights at two latrine sites.

Overexpression of Proneural Genes in the Embryonic Hindbrain Utilizing In Vitro Electroporation Techniques



Angela George,* Patrick Holland,* and Rebecca Landsberg (Mentor), Biology Department University of Illinois Springfield

The brainstem, is a lower extension of the brain connecting the cortex to the spinal cord. Brainstem

neurons regulate vital functions, such as respiration, motor coordination, and cardiovascular control (Altman and Bayer 1987). The inferior olivary nucleus (ION) is a defined cluster of functionally related neurons, found in the medulla of the brainstem. Abnormal ION development has been associated with disorders including such syndromes as sudden infant death syndrome and fetal alcohol syndrome (Gilman and Quinn 1996; Johnson et al 1996; Lamont et al 1995; Yelin 2007, Joubert et al. 1969). Understanding the mechanism underlying ION development can provide insight into these diseases. The overall goal of this study is to identify factors that promote ION neuron fate by using a novel electroporation technique developed by Holland et. al (accepted, JoVE). In this experiment, plasmids containing genes encoding proneural transcription factors will be overexpressed in the progenitors known to generate ION neurons by

electroporation into embryonic day 11.5 mouse embryos. The genes chosen for overexpression are shown to have proneural functions in other neural progenitor populations and may play a role in specifying the neurons of the ION. Overexpressing these genes will determine if they have an influence on the development of the neurons of the ION.

Zero valent iron nanoparticle (nZVI) preparation by a sustainable method and application in bacterial denitrification



James R. Johnson,* Aubrey Watson,*
Stephanie Gorsuch,* Nicole Vanderpool,*
and Keenan E. Dungey (Mentor),
Chemistry Department
University of Illinois Springfield



Zero valent iron nanoparticles (nZVI) have found application as catalysts and in environmental remediation. We have developed an environmentally sustainable method of nZVI production using biochar from milo seed, *Sorghum vulgare*. The milo seeds were charred and twice gasified to produce porous activated carbon (>500 m2/g). The biochar

was impregnated with iron(III) salts (citrate or nitrate) and the iron was reduced by carbothermal reaction. The resulting nZVI were characterized by powder X-ray diffraction and transmission electron microscopy (TEM). TEM indicated that the iron nanoparticles ranged in diameter from 30 nm to 100 nm, depending upon the salt and preparation conditions. We examined the ability of the carbon-supported iron nanoparticles to enhance bacterial denitrification. Denitrification is an environmentally important process to decrease eutrophication from agricultural runoff. Under anaerobic conditions, Pseudomonas aeruginosa reduces nitrate, and nZVI can act as an electron donor.

Detecting the Dark Disk that Obscures Epsilon Aurigae



Joshua Massey* and John Martin (Mentor), Astronomy/Physics Department University of Illinois Springfield

Epsilon Aurigae is an eclipsing binary variable star. Every thirty years, a dark disk passes in front of it. As the light from the star filters through the disk it

gains absorption features that can tell us about its composition and structure. The UIS Barber observatory made more than forty observations during the last eclipse (July 2009 – May 2011). The data were calibrated using a spectrum of Mercury to determine the wavelength scale across the spectrograph orders. I analyzed the spectra of Epsilon Aurigae from before the eclipse until far after the eclipse, comparing them to determine if any significant changes occurred.

Green Organic Reactions in Aqueous Media



Brittney Meyer,* Harrison Schuster* and Layne A. Morsch (Mentor), Chemistry Department University of Illinois Springfield

Our research group is interested in implementing green chemistry techniques to standard organic chemistry experiments to make them safer, produce less waste and teach green chemistry concepts. Some primary goals of green chemistry are to reduce or eliminate waste (i.e. solvent, by-products, etc.), reduce or eliminate hazards (i.e. toxic materials, volatile compounds, etc) and increase the efficiency of processes. Our research group endeavored to reduce waste, hazards, and energy usage of standard organic lab exercises. There has been a lot of recent activity in exploring organic reactions without solvent or in aqueous solutions. We have successfully removed the organic solvent from two standard organic lab reactions. Removing the solvent enables bi-phasic reactions to occur with aqueous reagents. Greener Wittig reactions (a reaction between an aldehyde and a phosphorane) have been reported in the literature, however some use DMF as the solvent and propanol to recrystallize. Our research group explored "greening" this reaction by replacing the DMF with water. We also replaced propanol (typically synthesized from petroleum products) with ethanol (made from fermenting grain such as corn) for recrystallization. The reaction proceeded with usable yields from a variety of aldehydes using benzyl triphenyl phosphene. To ensure this process was generally applicable, several trials were performed using different aldehydes, all of which proceeded to products.

Inhibition Kinetics of Carboxypeptidase B



John Novak* and Layne A. Morsch (Mentor), Chemistry Department University of Illinois Springfield

The proteolytic enzyme Carboxypeptidase B (CpB) is known to convert proinsulin into insulin in humans, as well as regulating fibrinolysis. Carboxypeptidases

hydrolyze the peptide bonds of amino acid residues (with basic side chains) at their carboxy terminal end. CpB acts as a highly specific catalyst cleaving only lysine and arginine. UV-Vis spectroscopy was used to assay the catalytic activity of CpB on various concentrations of the chromophore substrate hippuryl-L-arginine. The initial velocities of these reactions were plotted against the substrate concentrations to produce Michaelis-Menten and Lineweaver Burk plots to obtain a maximum rate of substrate consumption (Vmax)of 2.01 x 10-5 mM/min and a Michaelis constant (Km)of 0.146 mM. The effectiveness of a combination of imidazole and zinc as an inhibitor of CpB was explored. The half maximal inhibitory concentration (IC50) and dissociation constant of the enzyme-inhibitor complex (Ki) were also determined. This methodology will be applied to a series of inhibitors based on imidazole and lysine (one of the substrates of CpB) that still need to be synthesized.

Your Styrofoam Cup's Second Coming



Kyle C. Pratt* and Marc A. Klingshirn (Mentor), Chemistry Department University of Illinois Springfield

Styrofoam is manufactured from the process of taking polystyrene beads and expanding them through heat. By current technology, Styrofoam cannot be recycled

efficiently. Limonene is a colorless liquid hydrocarbon, classified as a cyclic terpene, and can be considered a "green" solvent since it can isolated from citrus fruits. Waste styrofoam can be easily dissolved in limonene rather than using harmful solvents such as toluene or chloroform. By using a specific dilute concentration of ethanol, the polystyrene can be reconstituted in a bead form. By using the described process, the viability of forming different functionalized materials will be explored and discussed. Potential applications of the resulting materials include use as sensors and for water purification.

CLCA2 is a self-cleaving metalloprotease that suppresses growth of human breast cancer cells



Grace Ramena,* Vijay Walia, Yang Yu, and Randolph Elble (Mentor), MMICB and Pharmacology Department Southern Illinois University School of Medicine



About 12% of women in the US develop breast cancer over their lifetimes, and the triple-negative subtype is responsible for much of the mortality. More effective therapies are needed for this lethal subtype. Human CLCA2 is a candidate tumor suppressor gene. Previous studies have shown that hCLCA2 is p53-inducible growth inhibitor that is

lost during breast cancer progression. In invasive breast cancer cell lines, it is downregulated by 200-fold. CLCA2 is a 943 amino acid type I transmembrane protein that is cleaved near amino acid 700 to produce a diffusible 100kD product. The N-terminus contains a hydrolase-like domain with a well-conserved HEXXH zinc binding amino acid motif. We hypothesized that zinc catalyses autoproteolytic cleavage of CLCA2, and the resulting diffusible product might have anti-proliferative activity. To test this, we overexpressed CLCA2 in 293T cells, made membrane extracts, and treated with different cations or cation-chelating metalloprotease inhibitors and then subjected to western blot analysis. Our data suggest that cleavage of hCLCA2 is promoted by zinc and inhibited by EDTA. To test antiproliferative activity of the ectodomain, we fused it to GST and used affinity columns to purify it, then treated MDA-MB-231 (metastatic), MCF7 (tumorigenic, non-metastatic) and MCF10A (normal, immortalized) cells. Growth inhibition or cell death was observed in 231 and MCF-7 cells while control cells showed little effect. These results suggest that hCLCA2 is a zinc-dependent metalloprotease and a potential therapeutic for breast cancer.

Assessing Optimal Sampling Methods for Illinois Freshwater Mussels



Zachary Rasche* and Amy McEuen (Mentor), Biology Department University of Illinois Springfield

It is estimated that at least 71% of North American native mussel species are now either endangered or threatened. Accurate values for mussel abundance

and richness are needed in order to properly assess and conserve the remaining communities of this imperiled taxon. The current method typically used by the Illinois Natural History Survey to survey freshwater mussels is the four man-hour method. This study compares the four man-hour sampling method to the quadrat sampling method. The results will be analyzed for differences in richness, abundance, and size selectivity. The percent of endobenthic mussels (mussels burrowed below the stream substrate) in the community may influence which method is preferred, as the four man-hour approach may not address the endobenthic community as well as the quadrat method. For this reason, the endobenthic community will also be examined to see if it changes with time of year. Our poster will discuss which sampling method is most appropriate, and whether or not the appropriateness is dependent on the time of year.

Occurrence of Boisduval Scale, *Diaspis* boisduvalii (Hemiptera: Diaspididae) on Native Epiphytic Orchids in Collier Co., Florida, Including Fakahatchee Strand State Preserve



Haleigh A. Ray,*1 John P. McCormick,1 Andrew L. Stice,1 Ian Stocks,2 and Lawrence W. Zettler1 (Mentor), 1 Orchid Recovery Program, Illinois College and 2 Division of Plant Industry, Florida Department of Agriculture and Consumer Services

We present the results of a field study conducted in 2011 to assess native epiphytic orchids in South Florida for infestations of armored scales (Hemiptera: Coccoidea: Diaspididae). A total of 1,726 orchids in 10 taxa were surveyed at seven locations at three sites. Boisduval scale, *Diaspis boisduvalii* Signoret, was detected on 2.3% of the orchids from six of the ten orchid species, and was present at all three primary sites surveyed. *Prosthechea cochleata* and *Epidendrum amphistomum* (Asparagales: Orchidaceae) appeared to be most vulnerable to this scale, with infection totals of 5.8% and 2.1%, respectively. Of 44 scales from the 39 orchids, 27% hosted hymenopteran parasitoids in various stages of development. The presence of *D. boisduvalii* adds an additional burden to stateendangered orchid populations and indicates that resource managers may need to expand management approaches to include plant-parasitic insect control.

Poneratoxin: A Reexamination by HPLC Tandem Mass Spectroscopy



Hillary G. Rikli* and Stephen R. Johnson (Mentor), Chemistry Department University of Illinois Springfield

In this investigation, venom from the giant "bullet ant" *Paraponera clavata* (Order: Hymenoptera) has been harvested and subjected to chromatographic

separations for the purpose of elucidating possible peptides that may be paralogous to Poneratoxin, a voltage-gated sodium channel modifier. The venom of this arcane solitary predator paralyzes small invertebrate prey and causes highly exaggerated pain in large vertebrates. When initially described, the neuroactive fraction was rechromatographed revealing two distinct peaks. However, when the primary structure was determined by Edman degradation, it was concluded that the two "similar" peaks were "identical" peptides. Since many venoms have paralogous proteins as a result of differential splicing or gene duplication events, a reexamination of the two peaks using HPLC-tMS was performed. Both peaks were de novo sequenced by exact mass precursor ion selection and the data reveals that the two peaks are actually poneratoxin and a glycyl derivative precursor. This study shows how mass spectroscopy, a powerful tool that drives novel research, may be used to enhance our understanding of earlier investigations.

Treating Melanoma with Target-Specific Gene Therapy



Aarushi Sharma* and Randolph Elble (Mentor), Department of Pharmacology and Simmons Cancer Institute, Southern Illinois University School of Medicine

Human CLCA2 is a tumor suppressor gene that is downregulated in breast cancer, and its re-expression

induces apoptosis of metastatic breast cancer cell lines like MDA-MB-231. Recently, a transcriptional profile of melanoma revealed 162-fold downregulation of CLCA2 during the transition from primary to metastatic melanoma. Metastatic melanoma is chemoresistant, and there has been an upsurge in the incidence and mortality due to this malignancy in recent years. We hypothesized that restoration of CLCA2 expression in melanoma cells by viral transduction would suppress their growth. Therefore we infected melanoma cell lines WM 266-4, SK-MEL5, and SK-MEL28 with adenovirus encoding CLCA2 or AdEasy control and measured phenotypic effects. Expression of CLCA2 was confirmed by immunoprecipitation and western blot. Growth curves revealed that CLCA2 inhibited proliferation of melanoma cells, but cell fate varied with the cell line. A senescent-like phenotype with multi-nucleated giant cells predominated in WM 266-4, while SK-MEL 5 underwent apoptosis within 3 days of infection, and SK-MEL28 exhibited senescence followed by cell death 4-5 days after infection. CLCA2 adenovirus increased expression of p53 in a time-dependent manner in WM 266-4. These results are strongly indicative of tumor suppressive action of CLCA2 in malignant melanoma. To test this in vivo, we have transferred CLCA2 to and AAV vector that expresses CLCA2 from a melanocyte-specific promoter. Future work will trace the downstream signaling pathways by which CLCA2 induces senescence and apoptosis in melanoma and whether delivery of CLCA2 can inhibit metastatic melanoma in vivo.

Going Nuts Over Carbon Dioxide



Jen L. Vogel* and Marc A. Klingshirn (Mentor), Chemistry Department University of Illinois Springfield

Juglone (5-hydroxy-1,4-naphthoquinone) is an allelopathic compound found naturally in the black walnut. It is of interest because of its toxic ability to

inhibit certain enzymes that are essential for metabolic function, which may stunt growth in several different types of plants – making it an excellent herbicide. Three different methods of extraction were utilized to isolate juglone from black walnuts (*Juglans nigra*). Liquid carbon dioxide (CO2), liquid CO2/95% ethanol, and Soxhlet extraction with 80% and 90% ethanol were performed with various parts from the black walnuts (pith, skin, husk, and heart) to determine the ability to isolate juglone. The liquid CO2 extraction method is considered to be a greener procedure because it does not produce any solvent waste and may possess enhanced selectivity. Results from the different extraction methods will be discussed.

T-oligo drug delivery and mechanism of action



Luke Wojdyla,*1 Deven Etnyre,2 Jason Fong,2 Neelu Puri,2 and Layne Morsch1 (Mentor), 1 Chemistry Department University of Illinois Springfield 2 University of Illinois College of Medicine at Rockford

Telomeres are specialized structures located on the ends of chromosomes which play important roles in genomic stability and mediate cell growth. When critically short, telomeres signal for DNA damage responses and are currently key players in cancer therapy. Exposure to DNA oligonucleotides with sequence homology to the telomere overhang TTAGGG (T-oligos) have been shown to induce DNA damage responses in multiple cancers similar to those induced after exposure of the telomere overhang. While previous reports have demonstrated T-oligo's success as a potential cancer therapeutic, little is known about its mechanism of action. We have investigated the role of the telomere specific poly(ADP-ribose) polymerase (PARP) tankyrase-1 in T-oligo mediated DNA damage responses. At the 3' end of telomeres, the single-stranded G-rich overhang folds over and forms a lasso-like "T-loop" which contains a protective structure called the shelterin complex. The shelterin complex is associated with several proteins, in particular TRF1, which negatively controls telomere length, and tankyrase-1, which parsylates TRF1 from the telomere and allows telomerase to access telomeric DNA. However, other studies suggest that tankyrase-1 may play an important role in activating p-53 mediated DNA damage responses in cells with critically shortened telomeres. T-oligo has also been well documented to induce phosphorylation and upregulation of p53 in cancer cells. Western blotting analysis of total and phospho-p53 in MU melanoma cells after treatment with T-oligo and tankyrase-1 inhibitors revealed down regulation of both phospho-p53 and total p53, indicating a role for tankyrase-1 in T-oligo mediated signaling.

Fate Mapping of the Inferior Olivary Nucleus Utilizing Dual Gene Recombinases



Leslie Worrell* and Rebecca Landsberg (Mentor), Biology Department University of Illinois Springfield

The brainstem is responsible for a number of physiological functions that are necessary for life, such as respiration, pain sensitivity, and cardiovascular

control. Within the brainstem are several clusters of physiologically and morphologically similar neurons that are (called nuclei), one of which is the inferior olivary nucleus (ION). This nucleus is responsible for projecting the neural fibers that connect inputs from the cortex and spinal cord directly to the cerebellar Purkinje cells. Previous studies have tracked the origin of the neurons that make up the ION to a region surrounding the fourth ventricle known as the lower rhombic lip (LRL). The LRL is subdivided into domains characterized by the expression of distinct transcription factors. This study's purpose was to examine a possible contribution of LRL progenitors that express Ngn1 to the ION. This was accomplished utilizing a dual recombinase fate-mapping system that allowed for the detection of neurons that were derived from Ngn1 expressing progenitor pools. Using this fate-mapping system we have determined that the caudal-most regions of the ION can be traced back to the Ngn1 domain progenitor pool.

Loss of hCLCA4 promotes EMT in breast cancer



Yang Yu,* Vijay Walia and Randolph Elble (Mentor), MMICB and Pharmacology Department Southern Illinois University School of Medicine

The epithelial to mesenchymal transition (EMT) is a developmental program in which epithelial cells downregulate their cell-cell junctions, acquire spindle cell morphology and exhibit cellular motility. In breast cancer, EMT facilitates invasion of surrounding tissues and correlates closely with cancer metastasis and relapse. Previous studies in our lab showed that the candidate tumor suppressor hCLCA2 is expressed in differentiated, growth-arrested mammary epithelial cells but is downregulated during tumor progression and EMT. We further showed that hCLCA2 is a p53-inducible growth inhibitor whose loss indicates an increased risk of metastasis. Subsequent studies have revealed that another member of the CLCA gene family, hCLCA4, is also expressed in mammary epithelial levels, albeit at lower levels than hCLCA2. We find that hCLCA4 is also induced by stress and is similarly downregulated in breast cancer cell lines. Like hCLCA2, hCLCA4 is downregulated when EMT is induced by TGF beta, ectopic expression of mesenchymal transcription factors, or dilution of immortalized cells. Furthermore, knockdown of hCLCA4 in HMLE by shRNAs caused EMT. RNA and protein profiling for EMT markers showed that knockdown cells have lower expression epithelial marker E-cadherin and higher expression level of mesenchymal markers vimentin and fibronectin. Moreover, we found that hCLCA4 is co-regulated with hCLCA2 in HMLE cells. Knockdown of hCLCA2 led to down-regulation of hCLCA4 and vice versa. These findings suggest that hCLCA4 is, like hCLCA2, a marker of epithelial differentiation whose loss contributes to EMT and possibly metastasis.



SOCIAL SCIENCES

Impact of Cultural Diversity on Organizational Leadership



Seham Ataullah* and Patrick Mullen (Mentor), Public Administration Department University of Illinois Springfield

Organizational Culture promises to inspire its members to dedicate themselves to achieving the

organizational purposes by uniting them in common goals behind a vision and set of values that everyone holds dear (Tompkin, 2005). In late 1970, American organizations were trying to adapt Japanese organizational management techniques. In the 1980s, there was an influx of women in the organizations which changed the management practices in American companies. At the same time, the American economy was facing an economic turbulence that resulted in major strategic changes and improvements in innovations, forcing the companies to adopt Japanese management styles. These factors moved the companies into unfamiliar areas of management regimes. Ouchi and Price in 1978 stressed the importance of hierarchies, clans and theory Z in organizations. Moreover, they throw light on the cohesive and overlapping group formations within organizations. Wilkins (1983) expressed that every organization has its culture within itself. People working in the organization have their own assumptions about the culture of the organization. Culture is unique to each organization, regardless of the national culture in which it is embedded. According to the culture perspective, the shared values and beliefs provide a biding force among employees. They bind together for a common goal and determine their level of commitment, loyalty and performance. I believe that irrespective of the gender differentiation, managers should determine new ways of viewing the world and should explore ways that can foster the new and inclusive culture within the organizations.

Delayed Disengagement and Speeded Orienting Are Differentially Effected by Exposure Duration



Kristoffer Barrington,* Andrew Hathaway* and Karen Reinke (Mentor), Psychology Department University of Illinois Springfield

Previous research has shown that attention is automatically drawn towards emotional stimuli. When a target is in the same location as an emotional face (congruent trial) people respond faster than when a target is in a different location (incongruent trial). The current research examines how this attention affect occurs. Attention can be divided into at least two types: speeded orienting and delayed disengagement. Speeded orienting is where emotional stimuli cause one's attention to be drawn quickly towards that location causing a fast response to

congruent trials. Delayed disengagement is where it is more difficult to remove attention from the location of an emotional face to the location of a target, slowing a response to incongruent trials. It was suggested that there could be a relationship between the duration of stimuli and the type of attention effect. We looked at three different durations of exposure to the emotional face: 166 ms, 200 ms, and 250 ms to examine whether speeded orienting and/or delayed disengagement occurred. We found delayed disengagement at the shorter speeds of 166 ms and 200 ms. Speeded orienting was found at 250 ms. These results suggest that attention is differentially affected based on duration of exposure to emotional stimuli.

Redemptive Narratives in the 'It Gets Better' Project



Maureen Bocka* and Shoon Lio (Mentor), Sociology/Anthropology Department University of Illinois Springfield

This research project will discursively analyze the particular themes and tropes in the narratives of the

It Gets Better Project videos. We argue that these testimonials tend to be storied as redemptive narratives—i that is, LGBT youths who are being bullied will be able to endure, embrace and transform the negative experiences they are dealing with at present into something positive such that they will be able to move forward in life and ultimately leave positively behind (McAdams 2006). These redemptive narratives tend to elide the experiences of feeling suicidal/depressed and drug/alcohol abuse. As of thus far, 20 It Gets Better videos have been sampled and evaluated. 4 out of these 20 videos mentioned suicide and 2 mentioned drug/alcohol abuse. This absence is startling given that the project was created in response to the much publicized suicides of the LGBT youths due to bullying and harassment. According to Saewyc (2007) study, 7% of all youth attempted suicide while 33% of LGB youth attempted suicide. This means while that the majority of the LGBT population is not attempting suicide, they still have a higher rate of attempts than heterosexual teens. According to O'C onnor (1994), "The voices of gay adolescents may have been silenced, but these youths are screaming out in other ways to be heard, notably through suicide." We will theorize the absence of explicit mention of suicidal thoughts and drug/alcohol abuse in the redemptive narratives of the It Gets Better Project.

The Quality of Traditional and Nontraditional College Students' Romantic Relationships



Julia Capestrain* and Karen S. Mooney (Mentor), Psychology Department University of Illinois Springfield

Romantic relationships play an important role in the lives of college students, who are typically transitioning from adolescence to emerging

adulthood. According to Erikson (1982), the primary challenge for adolescents is to determine their identity and the challenge for emerging and young adults is typically to seek an intimate relationship, which involves a shared identity. Although college students are likely to be still exploring their identity (Arnett, 2006), some may be already

transitioning to the intimacy stage. One way to study the development of intimacy is to look at the quality of students' romantic relationships. We hypothesize that older students experience higher quality romantic relationships (higher in positive features, lower in negative features, and a more equal distribution of power) than the younger students. We have currently collected data from 139 UIS students and we expect to have about 50 more participants. Participants completed the Network of Relationships Inventory (Furman & Buhrmester, 1985), which measures 11 features of relationship quality (e.g, companionship, intimacy, conflict, power). This study is part of a larger project, but only students that currently have a romantic partner will be included in the analyses. We plan to divide these students into two age groups: younger (18-22) and older (23+). A series of 2 (age group) x 2 (gender) ANOVAs will be conducted, with the 11 features of relationship quality as dependent variables. This study can help us better understand how relationship quality changes throughout emerging and young adulthood for college students.

Attitudes and Perceptions of Undergraduate Psychology Students toward Psychiatry and Mental Health Professionals



Joel A. S. Dukett,^{1*} Kristina Dzara² (Mentor), Frances C. Shen¹ (Mentor), and Gaurav Jain,²
¹Department of Psychology, University of Illinois Springfield, ²Department of Psychiatry, Southern Illinois University School of Medicine

This study aims to understand the attitudes and perceptions of undergraduate psychology students toward the field of psychiatry. Previous research findings suggest that professional qualification may be more therapeutically important than perceived likeability (Eells, Fugua, & Boswell, 1999). However, many individuals, including psychology students, may lack information on psychiatric and psychological qualifications as well as understanding of the educational or vocational distinction between clinical psychology and psychiatry (Warner & Bradley, 1991). Pending institutional review board approval, a brief survey administered to undergraduate psychology students will determine whether students can differentiate the training and practice of psychologists and psychiatrists. This work will focus on how undergraduate psychology students view the role of psychiatrists, psychotherapy, and medication in the management of mental health. Respondents will also be asked about how their participation in classes and discussions with advisors have shaped their knowledge and attitudes. As counselors, social workers, and clinical psychiatrists often work collaboratively with psychiatrists, participants will be asked if they have considered, or would consider, working in a department of psychiatry. In order to assess potential variation in attitudes, demographics will be collected, including age, psychology concentration, year in program, field experience including related internship, and expected employment or post-graduate education. As there is limited scholarly work in this area, the findings from this study will have the potential to add to the limited literature. More importantly, this study will enhance understanding of undergraduate psychology students' perceptions of psychiatrists as well as what attributes may influence those perceptions.

The Relationship Between Work-School Conflict and Unhealthy Behaviors



Jodi Fishburn* and Shuang-Yueh Pui (Mentor), Psychology Department University of Illinois Springfield

This study is a pilot study aimed at understanding the relationship between work-school conflict and unhealthy eating and exercise behaviors. Work-school

conflict is defined as a type of inter-role conflict where work interferes with a student's ability to meet school-related demands and responsibilities (Markel & Frone, 1998). Previous research has shown that college students struggle to maintain a balance between work and school life, leading to negative outcomes, including lower academic performance, school readiness and satisfaction (Butler, 2007; Markel & Frone, 1998), and more alcohol consumption (Butler, Dodge, & Faurote, 2010). Inter-role conflict (e.g., work-family conflict) has been found to relate to consumption of a high fat diet and to lack of exercise (Allen & Armstrong, 2006). Participants were 60 full-time undergraduate students at a Midwestern university, who responded to a recruitment email sent from the primary researcher to the instructors. Those interested in participating clicked on a web link that directed them to a web survey, where they responded to questions about their work-school conflict, eating behaviors, exercise behaviors, and demographic information. We expect to find that students who report higher work-school conflict would self-report more unhealthy eating and exercise behaviors.

Impact of Asian Values and Experiences of Discrimination on Internalized Homo-Negativity and Well-Being Among Asian American LGB



Rebecca Goldsborough* and Frances Shen (Mentor), Psychology Department University of Illinois Springfield

Extensive research has consistently found that internalized homophobia is significantly correlated with poorer psychological well-being and distress

among LGB persons (D'Augelli, 1998; Goldsborough & Shen, 2011; Newcomb & Mustanski, 2010; Szymanski, 2005). Research suggests that several factors may lead to the development of internalized homo-negativity, such as discrimination, religiosity, traditional family values, past experiences with LGB, and others (Goldsborough & Shen, 2011; Herek, 1988; Meyer, 2003). This study will examine whether adherence to traditional Asian values moderates the impact of discrimination events on the development of internalized homonegativity and psychological distress. Specifically, we hypothesize that: (a) adherence to traditional Asian values and discrimination experiences will be significantly correlated with higher internalized homo-negativity and poorer psychological well-being among Asian American LGB; (b) adherence to traditional Asian values will partially moderate the relationship between discrimination experiences and internalized homo-negativity; and (c) adherence to traditional Asian values will partially moderate the relationship between discrimination and psychological distress. Using a websurvey, 100 undergraduate and graduate Asian American lesbian, gay, or bisexual students are being recruited from Asian American and LGB organizations across the

United States, including university-affiliated and Internet groups. The results of this study will shed light on whether adherence to traditional Asian values and experiences of discrimination will impact the development of internalized homo-negativity and psychological well-being among Asian American LGB persons.

College Students' Self-Perception and Behavior Problems: A Person-Oriented Approach



Wesley A. Hill* and Karen S. Mooney (Mentor), Psychology Department University of Illinois Springfield

Behavior problems are a cause for concern for many college students. Studies suggest that self-esteem is related to behavior problems in children and

adolescents (Donnellan, Trzesniewski, Robins, Moffitt, & Caspi, 2005). However, global measures of self-esteem may not be the best indicator for specific behavior problems (e.g., rule breaking behavior, depression; Swann, Chang-Schneider, & McClarty, 2007). Although global selfworth is correlated with more specific aspects of self-perception, individual differences in patterns of self-perception are obscured. This study uses a person-oriented approach to distinguish patterns of college students' self-perception and examines how specific behavior problems are associated with those patterns. We have currently collected data from 139 UIS students and expect to have about 50 more participants. Students completed the Self-Perception Profile for College Students (Neeman & Harter, 1986) and the Adult-Self Report (Achenbach & Rescorla, 2003). K-means cluster analysis grouped the students into a 5-cluster solution based on their perceptions of morality, global self-worth, intellectual ability, friendship competence, appearance, and athletic competence. As expected, some patterns consisted of students who had similarly high or low self-perception across all variables, but some of the patterns consisted of students who had mixed self-perceptions. A series of preliminary 5 (self-perception profile) x 2 (gender) ANOVAs were conducted to see whether students in these five profiles differed in terms of behavior problems. Our current findings suggest that although global self-worth plays a role in predicting behavior problems, the other aspects of self-perception may play a stronger role to some specific types of behavior problems.

The Effect of Choice Size on Choice Deferral Among Indecisives



Martha Rubio* and Shuang-Yueh Pui (Mentor), Psychology Department University of Illinois Springfield

This study examined the effect of choice size among decisive and indecisive people on whether or not people defer their choices (choosing not to choose).

People are more likely to defer their choice when given a large choice size than a small choice size (Dhar, 1997). In addition, the study is also looking at whether or not indecisiveness is related to how people make choices. In the present study, we measured participants' (N = 149) indecisiveness, then presented them with either 3, 6, or 12 pens and asked them to choose among them. We also gave participants a chance to defer their choice task (i.e., choosing a mechanical pencil). Results showed no statistical significant effect of choice size on choice

deferral (X^2 =.84, p=.65). Although we also did not find a significant difference in mean indecisiveness scores between people who deferred choice and those who did not, t(146)=.09, p=.93, we found that high indecisive people did find the decision task to be more challenging that low indecisive people regardless of the choice size presented, r(149)=.25, p<.01. Some plausible explanations for our lack of findings could be that the manipulation of the large choice size was not large enough, and that our decision task of choosing among pens was not important enough for us to find an effect.

Racial/Ethnic Differences in Academic Self-Efficacy and Motivation to Attend College



Rachel Tohme,* Kaitlin Easton,* Carrie Switzer and Frances Shen (Mentors) Psychology Department University of Illinois Springfield

This study investigates racial/ethnic differences among college students in terms of their academic self-efficacy and motivation to attend college. High academic self-efficacy, or the personal belief that one will be able to succeed in academic pursuits, has been found to be an important predictor of student success in college (Zajacova, Lynch, & Espenshade, 2005). Motivators to attend college are an important factor to look at because these motivators may influence the student's academic engagement and success. Relatively little attention has been paid to what motivates students to attend college. This is because most middle class American youth consider college the next logical step after high school (Phinney, Dennis, Osorio, 2006). Both academic self-efficacy and student motivation, however, are often reported at much lower levels by racial/ethnic minority students than by Caucasian students (Bembenutty, 2007; Edman & Brazil, 2007). In order to examine these issues further, a diverse group of students from colleges and universities around the United States are being asked to complete a questionnaire via email to measure student motivation and academic self-efficacy. We predict that racial/ethnic minority college students will report lower levels of academic self-efficacy and have different motivations for attending college than Caucasian students. It is our hope that this study can identify important differences in academic self-efficacy and the motivation to attend college that will aid educators in effectively recruiting and retaining students.

An Investigation of Undocumented Immigrant Youth Across the United States



Jasmine Torres-Gonzalez,*
Ashundria Oliver* and Haley
Seif (Mentor), Center for
State Policy and Leadership
University of Illinois
Springfield

The purpose of this study is to provide insight into and awareness of immigrant youth groups across the United States, with a focus on Latinas/os and their organizing efforts. There have been some small-scale, ethnographic studies of individual immigrant students groups (Seif 2004; S.I.N. Collective 2007), but little is known about the national scope of existing immigrant youth organizations. Our research is in progress; so far, we have conducted literature reviews, identified immigrant youth groups in various states and written a coding sheet to use to analyze the websites of different organizations that support undocumented and other immigrant youth. This research is being conducted with the support of thee UIS Center for State Policy and Leadership. Our preliminary findings are that many of these students are undocumented immigrants who were raised in U.S. who protest nonviolently against injustices. They are participating in marches, sit-ins, and "Coming Out" rallies, where they talk about their status as undocumented immigrants in the United States and the issues that they face. One main organization is the Immigrant Youth Justice League (IYJL) based in Chicago, IL. This organization provides support to undocumented youth in their fight for their human rights. Along with allies, including peers, teachers, parents, and various coalitions, they are letting the U.S. know that their voices will be heard.

Impact of Parental Pressure, Parental Support, and Stereotyping on Asian Americans' Career Development

Stacey Windisch,*1 Lucy Parker,*1 Andrew Hathaway,*2 Robert Torrence*2 and Frances Shen2 (Mentor),
1 Human Development Counseling Department,
2 Psychology Department, University of Illinois
Springfield



According to the Social Cognitive Career Theory (Brown & Lent, 1996), career interests and choice arise from beliefs about our capability to execute a course of activity (self-efficacy), and beliefs about the consequences of performing particular activities (outcome

expectations). Existing research has demonstrated that parental expectations significantly impact Asian American college students' career choices (Tang et al., 1999), and recent research has found that internalized Asian American stereotyping is associated with greater self-efficacy, outcome expectations, and interest in stereotypical careers (Shen et al., 2011). The purpose of this study is to determine whether expectations in math and science and internalized stereotyping mediate the relationship between parental pressure, parental support and career self-efficacy, outcome expectations, and interests in stereotypical careers. A websurvey was administered to 168 Asian American undergraduate and graduate students from universities across the U.S. The results indicate that efforts and expectations in math and science partially mediate the relationship between parental pressure and support and career development towards stereotypical careers among Asian Americans. The results also demonstrate that internalization of Asian American stereotyping fully mediates the relationship between parental support and career development towards stereotypical careers, but not between parental pressure and career development towards stereotypical careers. Implications for future research and career counseling with Asian American college students will be addressed.





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