FLORIDA UNDERGRADUATE RESEARCH CONFERENCE

~ FRIDAY -SATURDAY, March 16-17, 2012 ~

A Celebration of Achievement in Florida

About the Florida Undergraduate Research Conference:

This event, with its debut in 2011 at the University of North Florida, is held under the auspices of the Council of Florida Undergraduate Research Program Directors. It is designed to foster an appreciation for undergraduate academic achievements in Florida. The student presenters have a wonderful opportunity to share their research and projects with the greater academic community of the state, and be exposed to various ways in which they can further their research, in graduate school and beyond. Faculty presenters also offer new ideas for undergraduate research programs in a variety of fields. This year, Stetson University is proud to host the conference, with over 160 papers coming from every region of Florida.

Poster Presenters **Please arrive at least 15 minutes before your scheduled session** for set-up. If you have indicated that you need a poster board, it will be provided. If you have indicated that you will bring your own poster board, or if you did not check the request box, you will be expected to bring your own board. The maximum size is 3'x4'. If you indicated that you require a power outlet, access will be provided.

SCHEDULE OF EVENTS AT A GLANCE

Friday, March 16 7-8:30 pm Reception, DuPont-Ball Library

Saturday, March 17:
Breakfast 8:30-9:15: Hollis Center A and J. Ollie Edmonds Center

Posters Session A 9:15-11:45 Hollis Center A

Posters Session B 9:15-11:45 J. Ollie Edmunds Center

Faculty Presentations A 9:30-10:30 Science Center

Faculty Presentations B 10:45-11:45 Science Center

Luncheon 12-1:30 Hollis Center B

Posters Session C 1:45-4:15 Hollis Center A

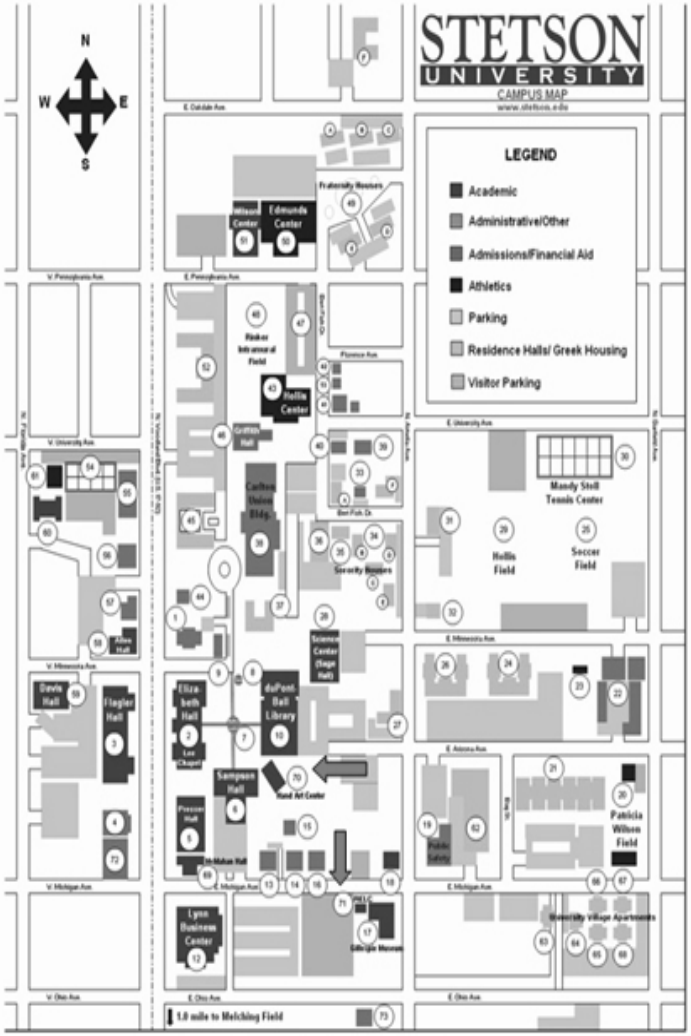
Posters Session D 1:45-4:15 J. Ollie Edmunds Center

Faculty Presentations C 1:45-2:45 Science Center

Graduate School Displays all day, Hollis Center

Alphabetical Legend

46	Admissions/Griffith Hall	30	Mandy Stoll Tennis Center
58	Allen Hall	63	Maxcy Hall
34C	Alpha Chi Omega	69	McMahan Hall
34F	Alpha Kappa Alpha	16	Meadows Alumni House
34B	Alpha Xi Delta	21	Nemec Hall
38	Carlton Union Building/ Food Services	32	Newman House
		20	Patricia Wilson Field
27	Carson/Hollis Hall	49C	Phi Sigma Kappa
53	Center for Service Learning	34A	Pi Beta Phi
45	Chaudoin Hall	49B	Pi Kappa Alpha
8	Coffee Kiosk	49D	Pi Kappa Phi
36	Conrad Hall	4	President's House
41	Counseling Center	5	Presser Hall
42	Cross Cultural Center	9	Print Shop
55	Cummings Gym	57	Public Relations & Communications
59	Davis Hall		
1	DeLand Hall	19	Public Safety
34E	Delta Delta Delta	61	Racquetball Courts
49A	Delta Sigma Phi	62	Residence Hall A
14	Development /Annual Giving	64	Rinker Clubhouse
15	Development Operations	71	Rinker Environmental Learning Center
10	duPont-Ball Library		
50	Edmunds Athletic Center	66	Rinker Hall
2	Elizabeth Hall and Lee Chapel	48	Rinker Intramural Field
52	Emily Hall	72	Rinker Native Plant Garden
22	Facilities Management	47	Rinker Parking Area
13	First Year Studies	18	Russian Studies Center
3	Flagler Hall	6	Sampson Hall
35	Language House	28	Science Center (Sage Hall)
11	Forest of Arden	31	Service Station
33	French House	49F	Sigma Nu
17	Gillespie Museum of Minerals	49E	Sigma Phi Epsilon
26	Gordis Hall	24	Smith Hall
70	Hand Art Center	25	Soccer Field
40	Health Services	32	Soccer House
7	Holler Fountain	37	Stetson Hall
43	Hollis Center	73	Stetson Station Coffee Shop
29	Hollis Field (Intramurals)	60	Stover Theatre
65	Hon Hall	54	Tennis Courts
44	Hulley Tower	68	University Village Apartment
39	International Education, Center for	23	Volleyball Courts
		56	Wesley House – Methodist Campus Ministry
2	Lee Chapel and Elizabeth Hall		
12	Lynn Business Center	51	Wilson Athletic Center
67	Lynn Hall	34D	Zeta Tau Alpha



Important Stetson University phone numbers
Admissions 386-822-7100 • Office of Public Relations & Communications 386-822-8920
Public Safety 386-822-7300 • Main Line 386-822-7000

Revised 2/2009

Numeric Legend

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3	Flagler Hall	40	Health Services
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Friday, March 16

RECEPTION 7-8:30 pm
Hosted by Bethune-Cookman University and Embry-Riddle University
Dupont-Ball Library

Come meet the presenters and faculty mentors in a relaxed setting, with a reception graciously provided by Stetson's sister universities in Daytona Beach. A poster from each participating school will be displayed at the reception as a taste of the exciting day ahead on the 17th. Come listen to the smooth jazz tones of Thin Film Magnetism, a local faculty ensemble, while you meet your colleagues from across the state. Afterwards, take advantage of the hopping nightlife of DeLand Florida on Bike Weekend!

Saturday March 17

BREAKFAST 8:30-9:15, Hollis Rinker Fieldhouse and J. Ollie Edmunds Center

POSTERS SESSION A 9:15-11:45 Hollis Rinker Fieldhouse A

A1: **Yassine Dhane** (UF), Oscillating salt water jet

A2: **Ashley Haddock** (UNF), Transcriptional regulation of Dual specificity phosphatase 4 (Dusp4) by Muscle-specific RING finger protein 1 (MuRF1)

A3: **Rachel Thome** (UF), Hand Size Estimation is a Predictor of Clinical Pain in Fibromyalgia

A4: **Tavya Benjamin** (U Tampa), Luminescent Europium(III) Complexes for Anion Sensing Applications

A5: **Christopher W. Bessette, Ashley Schiffmacher and Brett J. Reynolds** , (Florida Southern College), Adaptive Phenotypic Plasticity in the Hindlimb of the Cuban Brown Anole (*Anolis sagrei*)

A6: **Harrison Neal** (Stetson U), A Reliable Covert Communication Scheme Based on Voip Steganography

A7: **Jodi-Ann Browning-Bent and Ricardo DeMoya** (Barry U), Successful year-round fertilization and development of *Fundulus heteroclitus* in the laboratory

A8: **Vishal Patel** (UNF), Exploration of marine natural products as sources of antibacterial compounds.

A9: **Jillian Campbell and Joseph Macedonia** (Florida Southern College), An Acoustic Analysis of Individual Signatures in the 'Whinny' Vocalization of the Domestic Horse

A10: **Jeanne Ambrose, Sarah J. Keane, Iqra Javed, LouAnne B. Hawkins, and Christopher Leone** (UNF), Preference for Consistency: Predicting the Use of Stereotypes in Cases of Molestation

A11: **Lauren Cherry, Brad Bartel, Natasha Mohamed, and Joseph Macedonia** (Florida Southern College), A Comparative Study of Headbob Display Structure in Two Dewlap Color Forms of the Green Anole, *Anolis carolinensis*

A12: **Patrick Cherubin and Camila Garcia** (UCF), Polyphenolic Compounds of Grape Extract as Potential Inhibitors of Cholera Toxin

A13: **Taryn Cranford and Mary Utter** (U Tampa), Genetic Investigation of Limbal Squamous Cell Carcinoma in Haflinger Horses

A14: **Chris Cruikshank** (Florida A&M U), Computational Investigation of Available Resources for Natural User Interaction
A15: **Rebecca Black, Austin D. Carter, and Christopher Leone** (UNF), When Romantic Relationships Go Wrong: Self-Monitoring and Differences in Coping

A16: **Valentina Bolanes, Vita Argento, LouAnne B. Hawkins, and Christopher Leone** (UNF), Perceptions of Child Physical Abuse: The Impact of Defensive Confidence on the Use of Sex Stereotypes

A17: **Michael Dougherty** (FSU), Allometry and Morphological Response to Queenlessness in the Florida Harvester Ant, *Pogonomyrmex Badius*

A18: **Christopher Emerson** (FIU), Restriction enzyme assays of the allosteric effects of Ametantrone and Ametantrone derivatives on the binding of DNA Polymerase I to PhiX 174 RF DNA

A19: **Natalie Hofmann and Michelle Obi** (UNF), Who People Say I Ought to Be vs. Who I Think I Should Be: Self-Monitoring and Self-Discrepancies

A20: **Sara Haynes and Christopher Leone** (UNF), Does It Hurt More to be Ostracized Because You're Not Cool or Because You're Not Similar? It Depends

A21: **Sue Ann Flores, Lauren Sanchez, Gina Guillaume, and Christoph. J. Hengartner** (Barry U), Identification of synthetic lethal interactions between cdc13-1and yku80 mutant alleles in *S. cerevisiae*

A22: **Christopher Frye and Costas Efthimiou** (UCF), Spherical Harmonics in Higher-Dimensional Euclidean Spaces

A23: **Stephen Gilbert and Svetlana Vasilyeva** (UF), Ultrasonic Spray Deposition for Scalable Carbon Nanotube Thin Films

A24: **Jennifer Gonzalez** (UCF), Clinical Indicators and the Effects of Treatment for Child and Adolescent Sexual Abuse Survivors
A25: **Geoffrey Gray and Juan Baso** (USF), Molecular Docking for Development of Selective Retinoid X Receptor Agonists

A26: **Ray McClain, April Pearson, Toan Nguyen, and Jasmine Herbert** (Florida Southern College), Effects of Nutrient Concentration and Turbulence on the Potential of Chlorella for Biofuel Production

A27: **Talia Guardia, Alejandra Toro, Talia Guardia, Reshma Baddaloo, Shakima St. Clair, Graham Shaw,and Xiaotang Hu** (Barry U), A puzzle in TGF-mediated cdk activity in human myeloid leukemia cells

A28: **Austin Vance** (Eckard College), An Application of Behavior-Driven Design to Classroom Software

A29: **Santiago Guisasola** (UCF), The semiclassical limit of the one-dimensional focusing nonlinear Schrodinger equation (NLS) for compactly supported initial data.

A30: **Brett Abraham** (Stetson U), Analyzing Reverberation Times in a Class Room

A31: **Christian Bureu, Elizabeth Leblanc, and Leticia Vega** (Barry U), The role of nuclear Pif1p during meiosis

A32: **Garrett Fitzpatrick, Milap S Sandhu, Warren J Sher, Tina F Cheung, Garrett M Fitzpatrick, Alex J Tiemeier, Eric D Laywell, Brendan A Reynolds, and Dave D Fuller** (UF), Intermittent Hypoxia to Condition Neural Progenitor Cells in Transplant Strategies

A33: **Jonas Carson** (Valencia College), Hidden Trends in Everyday Computing

A34: **Marcela Toro, Sandra Richardson, Dana Brierre, Nella Delva, Christine Lynch, Anna-Gaye Nicholson** (Barry U), The effect of embryonic ethanol exposure on zebrafish development
A35: **Ivan Trivino** (UCF), Turbulence Model Comparison of Flow over a Backward-Facing Step

A36: **Chris Vanderslice and Emilija McNulty** (St. Petersburg College), Protein Expression in Apoptosis and Cell Proliferation

A37: **Bryan Henderson**, (UCF), College Student Attitudes about Cheating and Plagiarism

A38: **Leonold Evans Jr.** (UF), Promises: Progenitor Endothelial Cells as a Marker of Endothelial Injury and Repair in Sepsis

A39: **Travis Williams** (U. Tampa), The Biofilm Viability and Antibiotic Sensitivity of A Naturally Isolated Tetracycline Resistant *E.coli* Strain

A40**: Erika Young** (UCF), The Influence of Educational Differences on Marital Satisfaction in Low-Income Couples

A41: **Jennifer Griffis** (Santa Fe College), Analysis of Ionized Water for Silver Nanoparticles

A42: **Ashley Phillips, L. Rex Ellis and Todd Osborne** (UF), Subaqueous Podzolic Carbon Influenced by Sea-Level Rise

A43: **Peter Tonner, Vinodh Srinivasasainagendra, Shaojie Zhang, and Degui Zhi** (UCF), Transcriptomic Profiling of Ribosomal Protein Pseudogenes in Diverse Human Tissues

A44: **Alexis Guevara, Charles A. Yowell, and John B. Dame** (UF), Characterization of the expression pattern, processing, and subcellular localization of native PfPM9 during the asexual erythrocytic developmental cycle of *Plasmodium falciparum*.

POSTERS SESSION B 9:15-11:45 J. Ollie Edmunds Center

B1: **Adam Chen** (FAU), Assessing Reef Population Connectivity through the Integral Projection Model

B2: **Erick Douglas, Nihar Goswami, and Marc Mazou** (UNF), Osprey Flight Path

B3: **Chris Freire** (FSU), Value without God

B4: **Carlos Gomez** (FIU), Corporate Sustainability Reports in Asia and Latin America

B5: **Gregory Leighton** (UF), Castra et Urbes Lapideas: Functions and Legacies of Stone Castles of the Teutonic Order.

B6: **Paola Moore** (George Mason U), Southern Europe's DiIemma: Providing humanitarian aid while preserving its border security

B7: **Jesus Borrero** (FIU), Effects of Ethnicity on Voting Behavior: A Case Study

B8: **Gilly Bortman** (U Miami), Friendship Type as a Moderator of Withdrawn Behavior and Academic Achievement in Preschool

B9: **Julian Bravard** (Jacksonville U), Simulation for everyone: bringing event driven simulation to undergraduate education.

B10: **Kyle Bridge** (UNF), We Have Lost the State for a Long, Long Time: The Failure of Republicans and Reconstruction in Florida, 1868-1877

B11: **Jacob Brodnick, Kevin Matiko, Lin Lin, Finn Carlsvi, and Wenbo Dong** (ERAU), Eco-Dolphin Project at Embry-Riddle Aeronautical University
B12: **Michael Brooks** (UCF), Civilizing the Metropole: The Role of the 1889 Parisian Universal Exposition's Colonial Exhibits in Creating Greater France

B13: **Brianne Burton and Steve Morton** (Valencia College), Comparison of salinity and phytoplankton abundance along the US Coastline

B14: **Rachel Burnett** (Stetson U), You can lead an egret to water, but you can't make him forage: wading bird species richness and abundance relative to fluctuating water levels at a wetland restoration site

B15: **Elizabeth Bullock** (Stetson U), On the Market: Exploring Similarities and Differences of Self-Presentation in an Online Dating Community

B16: : **Nicole Allen** (FSU), Not Even Safe at Home: A Critical Look at United States Human Trafficking

B17: **Augusto Bejar** (FIU), Anime as a tool of enlightenment for Japanese Women

B18: **Matthew J. Cicanese**, Gabriel J. Langford, and Eric W. Kjellmark (Florida Southern College), Lichen Biodiversity of Northwestern Polk County, Florida: Implications for Air Quality.

B19: **Jessica Collier** (UCF), An analysis of parental income, education level, and distress in parents of children with special needs.

B20: **Marie Cram** (St. Petersburg College), Hogarth's Influence on Gin Laws: Art Influencing Alcohol in 18th Century London.

B21: **Carlos De La Riva, Amel Atie, Alfredo Molina, Benjamin Vine, and Tareq Abu Mejdad** (Lynn U), Social Entrepreneurship: Innovating Toward Sustainability

B22: **Jonathon Diaz** (U. Miami), El "Derecho al Olvido" - The "Right to be Forgotten" : A comparative analysis of US and EU internet privacy law
B23: **Camille Thomas, Nicole Dodd, Maria Roman, and Janice Stiglich** (UCF), Leading Out Loud (L.O.L.):YWLP's Campaign to Draw Lines Against Bullying and Harassment

B24: **Juan Alonso** (FIU), FRONTEX: A comparative case study on human rights and power sharing.

B25: **Emily Edwards and Shannon Whitten** (UCF), An Examination of the Prejudicial Value of Visual Evidence in the Context of a Criminal Court Case

B26: **Ada Espinoza** (George Mason U), Child trafficking in Argentina: sex exploitation, child labor and illegal adoptions

B27: **Sasha Tittel** (UCF), The Benefits of Companion Planting: Experimenting with Okra and Sunflower/Cabbage and Sage

B28: **Jessica Bianco** (Stetson U), Music for Social Change in Minas Gerais, Brazil

B29: **Chelsea Franco** (FIU), The Sidney Project: Bringing a New Renaissance to Renaissance Authors

B30: **Rokeshia Ashley**, (UF), Fashion, the Media and Youth Behavior: How celebrities and socialites fashion influence Youth

B31: **Megan Boehm** (FAU), Research Topics in Painting

B32: **Jasmine Gonzalez** (FAU), Behavioral Enrichment of Captive Black Bears (Ursus americanus)

B33: **Catharine Hargenrader, Tessa Skilton, Madeleine Gagne, Adania Flemming** (U Tampa), Spatial and Temporal Variation in Epiphytic Macroalgal Community on Mangrove Pneumatophores in Tampa Bay.
B34: **Ryan Henry, Jesse Robinson and January Watters** (St. Leo U), Potential presence of antibiotic resistant organisms in Tampa Bay molluscs.

B35: **John Horton and Samantha Wootan** (UNF), Is a Picture Worth 1,000 Words?

B36: **Michael Whiteside** (U Tampa), Effects of predatory blue crabs on the byssus production in the non-native Asian green mussel *Perna viridis* in Tampa Bay

B37: **Marina Lauck and Evelyn Frazier** (FAU), An analysis of the vegetation within the FAU Preserve as a basis for management of scrub habitat for Gopherus polyphemus

B38: **Adee Benartzy** (UCF), The Pastel Medium: Communicating Sexuality and Promiscuity in Late Nineteenth-Century Paris

B39: **Daniel Tapanes** (FIU), Crisis, Questions, and Cures? Public Health of the Peruvian Amazon Rainforest

B40: **Gabriella Wuyke, Sonia Zniber and Sofia Lakhdar** (Lynn U), Rethinking School Food: Moving from Consumerism to Sustainabiliy

B41: **Zachary Zermay** (FSU), The Syrian Crisis An Opportunity to Strike at Assad through the Execution of a No Fly Zone and Utilization of the International Criminal Court

B42: **Kane Magnuson** (St. Petersburg College), China, Taiwan and the One China Principle

FACULTY PRESENTATIONS A 9:30-10:30 Science 218, 221, 257

Off-Campus Undergraduate Research Experiences Science 218

Kimberly Schneider, University of Central Florida

There are numerous programs that invite undergraduates to leave their home institutions to conduct research. Opportunities are available at universities nationwide, as well as research facilities (e.g., the National Institute of Health). Undergraduates from all disciplines, from polar science to world politics, from computer vision to archaeology, can find research topics of interest to them. The majority of these research programs are available during the summer, with applications due in February and March. However, opportunities are offered throughout the academic year. This seminar will provide an overview of these opportunities including the typical application process, student requirements, and program structure. Several specific programs will be reviewed in detail. The seminar will also provide tips on how to find the right program for each individual student.

LEVERAGE – An Interdisciplinary Honors QEP Program Facilitated by Analogical and Virtual Research Labs Science 257

Hong Liu, Embry-Riddle Aeronautical University

LEVERAGE stands for Learning Enhancement Via Experimentation Research And Guided Exploration. It is an interdisciplinary Honors QEP Program facilitated by analogical and virtual research labs. The three folds of strength of the LEVERAGE program synergize to a pivot to leverage the challenges of the REU program. The students can explore a problem under concern from all three different legs of sciences, which are: the theory, the computational science, and the experimental science.
The PIs observed that the following three major challenges that hinder the success of the REU:
1. Critical thinking: Most undergraduates only got trained to plug in data to formulas and demonstrate little ability to extend mathematics concepts beyond an algorithmic level. Hence, most research topics suitable for graduate students are not proper for REU because the problems with scientific significance rarely fit the scope of one to two courses for undergraduate students.

2. Complexity: Undergraduates lack experience to divide complex problems into multiple comprehensible small problems. However, the complexity of valuable scientific research is typically beyond the comprehensibility of undergraduates.
3. Applicability: Undergraduates have limited domain knowledge to their applications. Therefore, they cannot connect the domain knowledge to validate their mathematical models. They are even more intermediated to open ended problems.
The three folds of unique strengths of the LEVERAGE program provide sound, original, and ERAU/QEP designed solutions to the three above challenges of REU:
1. The LEVERAGE program will select specific interdisciplinary topics whose individual components fit the disciplinary boundary and size limitation of individual team projects for undergraduates yet those small components can be assembled to significant scientific endeavor.
2. The LEVERAGE program can provide undergraduate researchers the required guided exploration to the problems under concern. A model centered methodology and system engineering procedure will be used to guide them to take small steps, analyze the problems incrementally and refine the results iteratively.
3. The LEVERAGE program is facilitated by the analogical and virtual dual labs. The facilities provide students the immediate visual and hand-on feedback to their queries. The Nonlinear Wave lab facilities (NLWL2 and 3) provide students the unique hand-on experience to measure and validate their research results. The computing software tools offers the students the opportunities to visual platform to build and simulate their mathematical and computing models.

Every path has its puddles, but you don't have to step in them: Negotiating potential problems in the mentor-protégé relationship Science 221

LouAnne Hawkins, University of North Florida

Are you a faculty-mentor that experienced one of those train wreck relationships with a student-protégé? Perhaps you are a student that still does not understand what went wrong while you were working with a faculty member. Others of you may have had rich, productive mentor-protégé relationships. Regardless of your previous experiences, these relationships are vital to the productivity of faculty and the success of students. Why is it then that some mentor-protégé relationships seem charmed whereas others appear disastrous? The mentor-protégé relationship, like most relationships, is a dynamic association fraught with opportunities for success as well as disaster. The relatively predictable trajectory of this relationship enables informed mentors and protégés to better negotiate those periods during which conflict and poor judgment may undermine the relationship. The conventional trajectory of a mentor-protégé relationship and related reactions as well as functional and dysfunctional responses will be discussed. In this workshop, we will use scenarios to illustrate some of the common pitfalls into which faculty and students sometimes fall. We will further discuss warning signs of these

potential pitfalls as well as strategies for avoiding these problems before they occur and recovering from them after they occur.

FACULTY PRESENTATIONS B 10:45-11:45 Science 218, 221, 257

Making the Leap from Undergraduate to Graduate Science 218

Kimberly Reiter, Stetson University; **Katie Fitzgerald**, University of Central Florida; **Andrew Kamerosky**, Bethune-Cookman University; **Jennifer Snyder**, Stetson University

Sometime in the undergraduate researcher's junior year comes the realization that it is time to prepare for graduate school. While you may have the forms and interviews in order, are you truly prepared for this venture? Do you have the discipline and determination to take on graduate work? Four recent graduate students in various fields talk about making the leap from undergraduate star to graduate school workaholic, and will help you decide for yourself whether graduate school is right for you. The panel will invite discussion on topics ranging from how to decide if the graduate school is the right fit for you, financial and social challenges, academic rigor and how to be successful in your chosen program.

Enhancing STEM Students Research Experience via Computing Science 257

Hongmei Chi, Florida A&M University

There is a growing concern that the United States is not preparing an adequate number of students, teachers, and practitioners in the area of science, technology, engineering, and mathematics (STEM). In this paper, we present how to increase the number of STEM students who graduate with discipline-specific computational competencies that enhance student performance and broaden opportunities for employment, advanced study and career growth. Computational skill has become a basic skill that all STEM students need to find their place in the workplace and to succeed in advanced study. Through conducting discipline-specific computational projects with STEM faculty, those STEM students are interested into cross-disciplinary research among STEM disciplines. Their research experiences and successes have laid a solid foundation for students to pursuit advanced degrees. The faculty at CIS Department has served as catalyst for identifying computational competencies and developing research projects and supporting other STEM faculty development to promote application of discipline relevant computing technology.

Promoting a Meaningful Undergraduate Research Experience Science 221

Flona Redway and Teresa Petrino, Barry University

Barry University offers research in the sciences as part of its curriculum, and students are directly mentored by faculty in their research laboratories. This presentation discusses our research profile across academic disciplines and levels. All freshmen in the sciences are invited to participate in the ROADS club to expose them to undergraduate research. Students carry out authentic interdisciplinary group research and present at our annual STEM symposium. Sophomores in RISE are paid hourly to carry out independent research with Barry faculty during the fall and spring semesters; during the summer they carry out research at research intensive laboratories; and present at national scientific meetings. As juniors and seniors, MARC trainees receive tuition, benefits, and stipend and follow an enriched curriculum. Trainees enroll in a bioinformatics course, carry out academic year research with a Thesis for credit and also spend the summer in research intensive laboratories. Student evaluation show that engaging in research, whether at Barry University or at a research-intensive institution, and presenting at scientific meetings are viewed as the most effective components of the curriculum, and indeed these activities are the core of our research education programs.(Supported by NIH NIGMS MARC U*STAR Grant, T34 GM008021 and MBRS RISE Grant R25GM059244.)

LUNCHEON 12-1:30 Hollis Rinker Fieldhouse B

Opening Remarks: Dr. Beth Paul, Provost, Stetson University

Keynote Speaker: *Right Brain/Left Brain: A Half-brained Idea?*

Dr. Camille King, Assoc. Professor of Psychology, Stetson University

Dr. Camille Tessitore King is an Associate Professor in Psychology at Stetson University. She received her undergraduate (B.A) and graduate (M.A. & Ph.D.) degrees in biological psychology from the University of Virginia. After completing the PhD, she completed post-doctoral positions at the University of Michigan and the University of Florida, working there with Dr. Alan Spector. Her collaboration with Dr. Spector, who now is at Florida State University, has continued for 15 years. Dr. King has published numerous articles on the effects of taste nerve

degeneration and regeneration on neuronal activity and taste-related behaviors in rats. She has also been a principal or co-investigator on several grants from such prestigious organizations as the National Institutes of Health and the National Science Foundation—including one with her husband Michael King, professor of Biology at Stetson. Dr. King's passion is teaching about the brain. In addition to her regular courses, she serves as coordinator of the Betty Batson Bell Brain & Learning Lecture series, in which she gives lectures each semester on how the brain learns and remembers and the factors that influence these processes. One of her favorite constituencies to talk to are school-aged children, who seem the most fascinated with learning about their brains! Dr. King was also honored for her outstanding work with undergraduates with a Faculty Advisor Research Grant from the International Honor Society in Psychology (Psi Chi).

FACULTY PRESENTATIONS C 1:45-2:45 Science 218, 221, 257

Financing Your Graduate Education Science 218
Michael Aldarondo-Jeffries, University of Central Florida

"How am I going to pay for this?" It's a major concern for most people pursuing a graduate education. This session will educate students about the different types of funding available, application procedures, and various deadlines. This presentation is ideal for anyone considering applying to graduate school in the future.

Designing an Integrated Interdisciplinary Environmental Program that Uses Graduate Student Mentors in Support of Undergraduate Student Research
Science 257

Michael Reiter and Rashan Moss, Bethune-Cookman University

In interdisciplinary or higher-order programs, faculty and students often have differing backgrounds. While this can provide challenges for program design, it offers the opportunity to learn from each other as well as from more traditional sources. This presentation will focus on the design of the undergraduate program of the Department of Integrated Environmental Science (IES) at Bethune-Cookman University, with particular emphasis on the integration of different disciplines within a single department, the role of service-based research, and the use

of graduate students as undergraduate student research mentors under the supervision of a faculty member. The IES department, including the curriculum, degrees, and administrative structure, was designed by a member of the Interdisciplinary Environmental Association (an organization of academics who approach environmental issues from interdisciplinary perspectives) with program design experience and Campus Compact training. Drawing from this background, service-based interdisciplinary goals were developed, and learning outcomes were formed based on the latest recommendations of the Environmental Systems and Sustainability Roundtable. The centerpiece of the B.S. program is a required service-based research project focused on environmental topics of local importance and requiring the application of interdisciplinary perspectives. In this way, B-CU students learn about interdisciplinary environmental issues in a format that promotes hands-on research experience useful to the local community. Undergraduate students are also matched with an IES graduate student whenever possible so that they can learn from the graduate student as well as from the project, gain a support person closer to their age and experiences, and see in their mentor a potential model for graduate-level work. The graduate student gains supervisory skills, possible assistance with a part of their research, and the chance to learn from the mentee. Examples and lessons learned from the IES field research programs at Bethune-Cookman University and the Stetson University field course "The Early English Landscape" will be discussed.

Making Research Matter: Incorporating Community-Based Research in an Undergraduate Curriculum Science 221

John Schorr, Stetson University

This presentation will describe the development of a community-based research initiative for students, faculty, staff, and community partners at Stetson University. Over a period of six years this initiative, begun as a part of the federally-funded National CBR Initiative administered by Princeton University\'s Community-Based Learning Initiative in partnership with the Corella and Bertram F. Bonner Foundation, has grown to include several very active faculty scholars and staff, dozens of community partners, and well over a hundred students.

The presentation will address issues associated with:

1. Defining an undergraduate CBR program.

For example, the Stetson University Community-Based Research program facilitates faculty, student, and community collaboration to plan and conduct research. Community-Based Research has a strong focus on addressing social problems identified by the community. Students learn to apply the theories and methods they have mastered in the classroom to real problems in the community and communities gain access to the rich research resources of the university. The result is a powerful learning experience for students and faculty as well as a valuable research product for communities.

2. Starting an undergraduate CBR program.

3. The challenges of an undergraduate CBR program for faculty, students, community partners.

4. The rewards of an undergraduate CBR program for faculty, students, community partners.

The session will conclude with an open discussion of the use of CBR in developing undergraduate research skills and competencies.

POSTERS SESSION C 1:45-4:15 Hollis Rinker Fieldhouse A

C1: **Jaclyn Irwin** (UF), Genetic Analysis of Captive and Released Perdido Key Beach Mice

C2**: Elizabeth Kowalski, Elizabeth A. Staiger, and Samantha Brooks** (U Tampa), A Genome-Wide Association Study Identifies Locus for Eye Color Variation in Puerto Rican Paso Fino Horses

C3: **Stephen Lee** (Stetson U), Insights: Sonifying Search Data

C4: **Timothy Roberts and Alicia Schultheis** (Stetson U), Effects of Different Algal Diets on Growth in Florida Freshwater Snail *Floridobia floridana*

C5: **Virginia Triplett** (UNF), Transcriptional Repression of the RING Finger/SPRY Domain Containing 1 (Rspry1) gene by Muscle-specific RING Finger 1 (MuRF1)

C6: **Joel Johnson and Christopher Williams** (UNF), "Your halfalogue is making me feel out of the loop": Overhearing partial conversations leads to feeling excluded and ignored.

C7: **Stephanie Klages** (UNF), The Inclusivity and Exclusivity of Laughter

C8: **Herrick Smith** (UNF): A Geospatial analysis of the Osprey Fountains Residence Hall

C9: **Bhargav Kondeti** (UF), Rational Drug Design of Carbonic Anhydrase IX inhibitors.

C10: **Angel Chinea** (U Tampa), A Comparative Study on the Dysmorphological Features of FAS Across Various Animal Models

C11: **Geoffry Laufersky** (FSU), Microwave Synthesis of Nanocrystals

C12: **John Currea** (FIU), Can a color-sound synesthetic experience be induced through classical conditioning?

C13: **Omar Leon** (FIU), Geometric Structures on Lie algebras Associated with Simple Graphs

C14: **Jie Liang** (UCF), Approximation by Bernstein Polynomials at the Point of Discontinuity

C15: **Jane Han** (UNF), Antibacterial and antidiabetic natural products from Florida marine bacteria

C16: **Yinting Lo and Jennifer Maier** (UF), Role of *Foxa* Genes in Intervertebral Disc Development

C17: **Kendall McCollough** (UCF), Determining the Sex of Juvenile Skeletal Remains via Dentition

C18: **Chad McDaniel** (UNF), Single-Molecule Magnets: A Playground for Magnetochemists, Physicists, and Spectroscopists

C19: **Katherine Mejia** (UCF) Marital Expectations Questionnaire: Examining congruence scores in low to moderate income couples with children

C20: **Nicole Millan**, Patricio Lau and Michael Hann (FIU), Genome Organization in the Human Sperm Cell

C21: **Teddy Moumouris** (UCF), The Change in Relationship Satisfaction Scores for Low-Income Couples Participating in Marriage and Relationship Education Workshops

C22: **Nicole Nagrani** (Stetson U), The effect of lateral hypothalamic stimulation on taste-related behaviors and neural activity in the gustatory brainstem

C23: **Tyler Huber**, (UNF), Design and Synthesis of a Chelation-Inducible-Turn Mimic

C24: **Janine Lloyd** (Stetson U), Use of dark repair to reform ultra violet damaged DNA by Chlamydomonas reinhardtii after exposure to ultra violet light

C25: **Rachel Peck** (Stetson U), Plant gender is affected by genotype but not environment in *Passiflora incarnata*: potential for evolution of a sexual system

C26: **Alejandra Toro and Gunjan Gahkar** (Barry U), Localization of Dex-propylamine-1X in PC-3 and RWPE-1 prostate cells

C27: **Christopher Ramirez and Zheng Shi** (UCF), Fundamental Study of Polyaniline with Reversible Photoacids

C28: **Christopher Riley** (Stetson U), The neural and behavioral responses to an umami taste solution in conscious rats.

C29: **Anabetsy Rivero** (U Miami), What makes viral recombination host specific?

C30: **Violeta Rodriguez** (FIU), Gender Differences in Alcohol Use and Depressive Symptoms Among College Students: A Reflection of Different Coping Styles

C31: **Cristian Rubiano, Emmeth Duran, and Jarod Weckwerth** (St. Petersburg College), Building-Integrated Photovoltaics

C32: **Kaitlyn Schmutz, C. M. Leonard, S. M. Crawford, M. Behnke, F. D. Eyler** (UF), Orbitofrontal sulcal structure, executive functioning, and prenatal cocaine exposure

C33: **Stephen Schoen** (UWF), The Effects of Fire on Groundwater Chemistry: Initial Observations

C34: **Yasmin Serajfar and Mason Meers** (U Tampa), The effect of dietary divergence and founder populations on tooth curvature and sharpness in two closely related monitor lizards.

C35: **Rachel Sewell** (UCF), What is Appealing?: Sex and Racial Differences in Perceptions of the Physical Attractiveness of Women

C36: **Howard Smart** (Florida A&M U), Practical Investigations on Platform as a Service (PaaS)

C37: **Lauren Smith and Sara Bolivar-Wagers** (UCF), Measuring the genetic effects of a recent population bottleneck of the keystone urchin species, *Diadema antillarum*

C38: **Monica Thomas** (UCF), The Effect of Kinase Inhibitors on Junin Virus Entry

C39: **Kelly Pyle and Terence Farrell (Stetson** U), The effects of incubation temperature on developmental period and hatchling performance in Ball Pythons (*Python regius*)

C40: **Raphael Benaksas** (FGCU), The Effects of Human Tears on Aid Giving and Bonding Behavior

C41: **Joshua Utter** (Jacksonville U), The Synthesis, Purification, and Characterization of K[Co3Ru(CO)12] and K[Co3Fe(CO)12] and Their Potential Applications

C42: **Jeremiah Wadley** (Florida A&M U), Practical Investigation of Security Apps for Smartphones

C43: **Samantha Wootan and Juliana Leding** (UNF), Need for Cognition and memory: Can one's natural processing style be influenced by external factors?

POSTERS SESSION D 1:45-4:15 J. Ollie Edmunds Center

D1: **Rachel Miles** (UCF), Half-Bloods, Heritage, and Narratives of Passing in the World of Harry Potter

D2: **Gabrielle Poon** (UNF), How a coach's gender and expertise level affect an athlete's performance and satisfaction

D3: **Ayman Elyasin** (FIU), Determinants of Consumers' Willingness to Buy Locally Grown Produce in Greater Miami

D4: **Stephen Shiveley, Samara Clarke, Amber Macchia, and Lou McNally** (ERAU), Hurricane Irene Coverage

D5: **Genee Glascoe** (UCF), Parolees' Perceived Deterrence of Graduated Sanctions: Developing a questionnaire for the CDCR Hope Pilot Program

D6: **Mandy Zamore and Christopher Leone** (UNF), Pro-Labor or Pro-Management? Social Dominance Orientation and Thought-Induced Attitude Change

D7: **John Horton** (UNF), Does Facebook Make You Smarter?

D8: **Alexis Harris and Christopher Leone** (UNF), Making a Good Impression or Being True to Ourselves: Which is More Important?

D9: **Amy Leone** (Eckerd College), Roe v. Wade: Increasing Individuals Rights or Enhancing Federal Powers?

D10: **Adria Llerena** (FIU), The Effect of Deployment on the Families of Iraqi and Afghanistan War Veterans

D11: **Kane Magnuson** (St. Petersburg College), The Ascent of the Red Dragon: The Dangers of China Becoming #1

D12: **: Max Gelber** (UF), Blogging and Uyghur Culture in the People's Republic of China (PRC)

D13: **Michelle Martin, Cynthia LaCoe, Linda Wray, Marianne Hillemeier, and Oralia Garcia-Dominic** (UF), The Issue of Misclassification: Self-Reported vs. Clinical Measures of BMI in Younger and Middle-Aged Adults

D14: **Lilian Milanes** (UCF), Health Care Providers Perspectives on Male Involvement in Sexual and Reproductive Health Care Needs

D15: **Felicia Becker** (St. Petersburg College), Social Media, Your Health, and Your Well-being

D16: **Kierstan Monahan, Caroline Silva and Thomas Joiner** (FSU), The Relationship Between Sexual Orientation and Suicide Risk: The Mediating Role of Belongingness

D17: **Krystal Christopher** (UCF), Representation of Breastfeeding in the United States: An Analysis of American Newspaper Articles

D18: **Robert Moulder, David A. Beane, and Christopher Leone** (UNF), Social Capital - As Plain as the Nose on Your Face(book): Self-Monitoring and Facebook Usage

D19: **Bianca Navarrete, Charlotte E. Gallagher, Aaron D. Leedy, and Michael P. Toglia** (UNF), Social Factors May Impact Survival Memory

D20: **Rebecca Panayiotou** (Stetson U), European Culture and its influence on Classical Music: A focused study on the works of Mozart, Bach, and Lalo

D21: **Micah Pastula and Christine Stopka** (UF), The effect of moderate-intensity exercise training on the cognitive function of young adults with intellectual disabilities

D22: **Paige Perez** (UNF), I Buy, Therefore, I Am: Zombification, Abjection, and Consumerism in Paule Marshall\'s Praisesong for the Widow

D23: **Steven Berry** (UNF), Religiosity and Prejudice: Bringing Allport and Ross into the 21st Century

D24: **Erik Torstensson** (UF), Political Islam in the 21th Century: Towards an Understanding of the Muslim Brotherhood in post-Mubarak Egypt

D25: **Lucie Rincher** (UCF), Preparing Future Communication Disorders and Sciences Scholars: The UCF McNair Scholars Program

D26: **Jason Ritchie** (UNF), The Effects of Time Pressure on Basketball Free Throw Shooting

D27: **Drew Fedorka** (UCF), Projecting Grandeur: President de Gaulle's State Visits of April 1960 in Historical Perspective

D28**: Christine Jacobson** (Stetson U), Protest Voting in Post-Soviet Elections: An Examination of the 'Against All' Vote in the 2010 Kyrgyz Parliamentary Elections

D29: **Laura Tinoco** (UF), Youth Evolutions: From Communist to Post Communist East Central Europe

D30: **Alicia Schrenk** (UNF), The Effects of High Infant Mortality on Juvenile Mortuary Practices

D31: **Nicholas Smith and Michael Reeves** (UCF), Does This Job Make Me Look Old? Theoretical Implications of Age Type on Discrimination

D32**: Chas Stikeleather** (Stetson U), Curbing Academic Dishonesty

D33: **Daniel Tapanes** (FIU), Peruvian Healthcare Reform

D34: **Esteban Santis** (UCF), Deus ex Machina and Manipulation of time in “A New Refutation of Time,” “The Secret Miracle” and “The Other Death”

D35: **Genesys Santana** (UCF), A Case of Double Consciousness: Americo-Liberians and Indigenous Liberian Relations 1840-1920.

D36: **Mueez Qureshi, George Kemp, and Rachel Runac** (UNF), Is Facebook Making us More Selfish?

D37: **Paul Turchan** (UNF), Aches and Pains: The Aversive Consequences of Working with a Burdensome Group Member

D38: **Maria Wrabel** (Stetson U), Achieving Food Security: Food Aid, Government Policy, and the Ties That Bind

D39: **Benjamin Kendall , Heather Glass, Mohammad Muhrji, and Joseph Perrotta** (Lynn U), Advertising, Media Literacy, and Sustainability

D40: **Jillian Masucci** (Stetson U), The Oracle of Omaha

D41: **Brian Matilla** (FIU), Analysis of the 2011 Tornado Super Outbreak in the Southeast US via Computer Models

D42: **Samantha Schroeder** (UCF), The Nature of Love: A Phenomenological Approach

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PRESENTERS AND SESSIONS

Kyle Bridge	B10
Jacob Brodnick, Kevin Matiko, Lin Lin, Finn Carlsvi, Wenbo Don	B11
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Adam Chen	B1
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Patrick Cherubin, Camila Garcia	A12
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Bryan Henderson	A37
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Jaclyn Irwin	C1
Christine Jacobson	D28
Joel Johnson, Christopher Williams	C6
Benjamin Kendall, Heather Glass, Mohammad Muhrji, Joseph Perrotta	D39
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Bhargav Kondeti	C9
Elizabeth Kowalski, Elizabeth A. Staiger, Samantha Brooks	C2
Marina Lauck, Evelyn Frazier	B37
Geoffry Laufersky	C11
Stephen Lee	C3
Gregory Leighton	B4
Omar Leon	C13
Amy Leone	D9

Jie Liang	C14
Adria Llerena	D10
Janine Lloyd	A8
Yinting Lo, Jennifer Maier	C16
Kane Magnuson	B42, D11
Michelle Martin, Cynthia LaCoe, Marianne Hillemeier, Oralia Garcia-Dominic	D13
Jillian Masucci	D40
Brian Matilla	D41
Kendall McCollough	C17
Chad McDaniel	C18
Ray McClain, April Pearson, Toan Nguyen, Jasmine Herbert	A26
Katherine Mejia	C19
Lilian Milanes	D14
Rachel Miles	D1
Nicole Millan, Patricio Lau and Michael Hann	C20
Kierstan Monahan	D16
Paola Moore	B6
Robert Moulder, David A. Beane,	D18
Teddy Moumouris	C21
Nicole Nagrani	C22
Bianca Navarrete, Charlotte E. Gallagher, Aaron D. Leedy	D19
Harrison Neal	A6
Rebecca Panayiotou	D20
Micah Pastula, Christine Stopka	D21
Vishal Patel	C24
Paige Perez	D22
Ashley Phillips, Todd Osborne	A42
Gabrielle Poon	D2
Kelly Pyle	C39
Mueez Qureshi, George Kemp, Rachel Runac	D36
Christopher Ramirez and Zheng Shi	C27
Christopher Riley	C28
Lucie Rincher	D25
Jason Ritchie	D26
Anabetsy Rivero	C29
Timothy Roberts	C4
Violeta Rodriguez	C30
Cristian Rubiano, Emmeth Duran, Jarod Weckwerth	C31
Genesys Santana	D35

Esteban Santis	D34
Kaitlyn Schmutz	C32
Stephen Schoen	C33
Alecia Schrenk	D30
Samantha Schroeder	D42
Yasmin Serajfar	C34
Rachel Sewell	C35
Stephen Shiveley	D4
Howard Smart	C36
Herrick Smith	C8
Lauren Smith, Sara Bolivar	C37
Nicholas Smith, Michael Reeves	D31
Chas Stikeleather	D32
Daniel Tapanes	B39, D33
Monica Thomas	C38
Rachel Thome	A3
Laura Tinoco	D29
Sasha Tittel	B27
Peter Tonner, Vinodh Srinivasasainagendra	A43
Alejandra Toro, Gunjan Gahkar	C26
Marcela Toro, Sandra Richardson, Dana Brierre, Nella Delva, Christine Lynch, Anna-Gaye Nicholson	A34
Erik Torstensson	D24
Virginia Triplett	C5
Ivan Trivino	A35
Paul Turchan	D37
Joshua Utter	C41
Austin Vance	A28
Chris Vanderslice, Emilija McNulty	A36
Jeremiah Wadley	C42
Michael Whiteside	B36
Travis Williams	A39
Samantha Wootan	C43
Maria Wrabel	D38
Gabriella Wuyke, Sonia Duchesne, Sophia Lakhdar	B40
Erika Young	A4
Mandy Zamore	D6
Zachary Zermay	B41

Stetson Undergraduate Research Committee:

- Kimberly Reiter, Ph.D., Associate Professor of History – Committee Chair
- Grady Ballenger, Ph.D., Dean, College of Arts & Sciences
- Carol Corcoran, Ph.D. Professor of Teacher Education,
- Melissa Gibbs, Ph.D., Associate Professor of Biology
- David Hill, Ph.D., Associate Professor of Political Science
- Sidney Johnston, Foundation Relations Officer, Corporate and Foundation Relations
- Christopher Ma, Ph.D. Visiting professor of Finance
- Kenneth McCoy, Ph.D, Professor of Communication Studies and Theater Arts (sabbat)
- Kevin Riggs, Ph.D., Professor of Physics
- David Schmidt, Assistant Professor of Music
- Leena Taneja, Ph. D. Assistant Professor of Religious Studies
- Christopher Tobler, Ph.D. Assistant Professor of Finance
- Jean Wald, Assistant Professor and Music Librarian
- John York, Ph.D., Assistant Professor of Chemistry

Thank you to the following:

- The Office of the Provost and the School of Business for financial support.
- Katherine Leitch and Judy Ward in the Office of Academic Affairs for budget support and organizational help.
- Pat Moore in Accounts for answering so many financial questions!
- The Stetson Undergraduate Research Committee, who devoted time and labor to bring this event to the Stetson campus.
- Bethune-Cookman and Embry-Riddle Aeronautical Universities for the opening reception.
- Thin Film Magnetism, the finest faculty jazz band anywhere, for playing at the opening reception.
- The CFURC Kimberly Schneider (UCF), LouAnne Hawkins (UNF), Juan Carlos Espinosa (FIU), Anne Donnely (UF) for all the advice, and materials for the program
- Larry Ramsey, Physics Department Machine Shop Technician and Dr. Kevin Riggs for poster easels.
- The Administrative Assistant for the Department of History, Jennifer Snyder, for handling catering and room blocks
- Stetson Catering for the fine job in hassled circumstances
- Most especially, the FURC interns Anjelica Johnston, Cayman Calabro and Christopher King, without whom all would have fallen apart.

ABSTRACTS

Brett Abraham
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Research Mentor : Kevin Riggs
Stetson University

Analyzing Reverberation Times in a Class Room

This research analyzes reverberation times and how they can be reduced by certain material. The goal was to provide an analysis of and solution to the high reverberation times of a classroom. The results showed that reverberation time could be reduced significantly by covering a portion of the walls with acoustical tile.

Nicole Allen
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Research Mentor : Terry Coonan
Florida State University

Not Even Safe at Home: A Critical Look at United States Human Trafficking

Most Americans are aware of human trafficking, but a vast majority does not know how close to home it really is. Three current cases are a strong testament to this fact. These cases assist in discovering two gaps in the U.S. law system: “How can officers separate trafficking victims from criminals?” and “What do we do with these trafficking victims once they are found?” Efforts currently being made to better the situation include: 1) Law enforcers being trained to handle trafficking cases and 2) New laws in the making, allowing victims to be sent to specialized treatment centers for aid.

Juan Alonso
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Research Mentor : Markus Thiel
Florida International University

FRONTEX: A comparative case study on human rights and power sharing.

This paper aims to study FRONTEX’s human rights records, as well as the relationships between the supranational institutions that regulate it. A comparative case study of some of FRONTEX’s Joint Operations (JO) will be conducted to analyze the agency’s actions, focusing on the agency’s adherence to human rights practices and accusations of human rights violations by NGO’s against FRONTEX and the EU. Especial emphasis will be given to reports on JO’s

dealing with the increased migration precipitated by the Arab Spring. Additionally, EU and FRONTEX \'s reactions to the accusations by different NGO\'s will be studied, as well as the power relationships between the Council of Europe, the Council of Minister and the agency. . This paper concludes by analyzing the steps that the EU and the agency has taken to address these accusations, while FRONTEX and member-states of the have accused each other of being the perpetrators of human right abuses.

Jeanne Ambrose, Sarah J. Keane, Iqra Javed, LouAnne B. Hawkins, & Christopher Leone
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Research Mentor : LouAnne Hawkins
University of North Florida

Preference for Consistency: Predicting the Use of Stereotypes in Cases of Molestation

Even though physical features of behaviors affect how behaviors are perceived, perceptions of these same actions vary depending on the nature of 'perceivers' (i.e., the individuals interpreting these behaviors). There are stable individual differences in the extent to which people prefer consistency in their perceptions (Bator & Cialdini, 2000). Thus, we expect that as individuals' preference for consistency increases, the relationship between their perceptions of others and their own stereotypes will become stronger. These ideas are being tested in the context of potentially sexually abusive encounters between adults and children. Male and female participants will read one of four randomly assigned scenarios involving an adult-child sexual abuse situation. The adult's sex and the child's sex will be systematically varied. Participants will indicate perceptions of both the adults and the children using 25 items from the semantic differential scale. Because participants are expected to have largely negative perceptions, stereotyping will be assessed using a more subtle measure - reaction time (i.e., the time taken to express these perceptions). Last, participants will complete the Preference for Consistency Scale (Cialdini et al., 1995). We expect that people will more quickly express their perceptions when adult perpetrators are male rather than female and when child victims are female rather than male (i.e., faster times for stereotype consistent information). Moreover, this pattern of differential responding will be most evident for people high rather than low in the preference for consistency. These results have important implications for whether abusive acts are appropriately reported so that the children suffering from molestation can receive the medical or psychological attention that they need.

Rokeshia Ashley
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Research Mentor : Julie Dodd
University of Florida

Fashion, the Media and Youth Behavior: How celebrities and socialites fashion influence Youth

The purpose of this study was to determine the connection between youth and fashion, as presented in youth-oriented fashion magazine, Teen Vogue, and the effect of fashion on secondary school students in terms of student behavior and achievement. This study was designed to collect information on whether or not student behavior is directly influenced by the fashion of celebrities and the media. A content analysis was used on the photographs and advertisements in Teen Vogue, from August 2010 to July 2011, to determine which fashion trends and which celebrities were used. A second content analysis was used to assess the attire of the high school students in the Santa Fe High School yearbooks in 2010 and in 2011. The content analysis of the two yearbooks were used to compare to the fashion trends presented in the teen fashion magazines and also to see how the high school students\' attire was affected by Alachua County\'s school uniform policy that was implemented for the 2010-2011 school year. Data on Alachua County\'s high school FCAT scores and student discipline incidents were examined for the two school years to evaluate the potential role of student attire in student academic performance and behavior.

Felicia Becker
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Research Mentor : Richard Mercadante
St. Petersburg College

Social Media, Your Health, and Your Well-being

As American executive businessman and co-founder of Sun Microsystems, Scott McNealy, once said, "Technology has the shelf life of a banana." This has been found to be extraordinarily true. Every ten seconds, would-be outdated technologies are replaced by their more advanced successors. As technology continues to evolve so does social media. Social media was created to allow individuals to communicate in ways never thought possible. Although now social media is being credited with the corruption and gradual downfall of society; the larger picture is being ignored. That being, with all great powers come great responsibility. It is our responsibility as a society to be educated about the changing world around us; and in doing so, use tools such as social media as a means to expand our opportunities, not limit them. The use of social media lies in our hands. Whether we choose to use it for positive means and purposes is up to humanity, as are most things in the modern world. So far, the pros of social media have outweighed any and all cons. Change can be intimidating. So it is no question why some might oppose technology. However, this is due to unfortunate misinformation. The advances being made further support the benefits of social media as it creates an outstretched hand of succor to those who seek its aid.

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Research Mentor : Masako Kubota
Florida International University

Anime as a tool of enlightment for Japanese Women

In the western perspective, animation is still considered to be only entertainment for kids and teens and far from being considered socio-culturally essential. But in Japan, anime not only has no boundaries on audiences and themes. Also it is essential for the cultural identity of the Japanese. Thus, anime can be used for more purposes than pragmatic entertainment. Anime can reflect the realities the Japanese live and teach them to change their lives for their self-betterment, which is to enlighten them. Women in Japan, unlike in other developed countries, still suffer heavy discrimination and disadvantages to bring their full potential as active players in their society. Being this a serious reality, many anime reflect and evolve from this in order to encourage their female audiences to either persevere in their situation and/or to encourage them to change their situation for the better, to make them dare to act by their own free will. Thus, my research question and purpose is to know how Anime is used as a tool for the 'enlightment' of Japanese women in order to become more active participants in their society. I will address this question by defining the functions that anime series and their characters have in order to show the realities which Japanese women live, and how they help and contribute to the empowerment and self-identification (that is enlightment) of their female audiences. I argue that anime can empower women because the series are focused more on the development of the individual characters rather than the plot themselves, thus, making the audiences to follow and learn from their female characters' journeys as they show their perseverance, perils, determination, morale, and virtues they go through in order to make a difference in the worlds they live as by their free will, being freedom a human right, they act to liberate themselves from traditional gender stereotypes in order to pursue their dreams and to accomplish moral-ethical deeds for the betterment of themselves and of their society.

Raphael Benaksas
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Research Mentor : Charles Gunnels
Florida Gulf Coast University

The Effects of Human Tears on Aid Giving and Bonding Behavior

Chemical signaling (chemosignaling) is used by many species to provide information about individuals. Chemosignaling can affect social cohesion in a group (e.g., pair-bond) by relaying information between the sender of the chemosignal and its recipient. Human tears resulting from an emotional context (i.e., psycho-emotional tears) may also be a signal that could affect social cohesion. In this study, I will determine whether tears that comes from being sad (i.e., social tears) affect bonding behaviors and aid giving between individuals. Volunteers (i.e., tear evaluators) will be asked to first discriminate between tears versus saline samples and then asked their willingness to give aid or bond after smelling sad tears or saline samples. I will evaluate tear evaluators\' response based on Likert-scale questionnaires. I will then run ANOVA tests to compare tear evaluators\' response after smelling sad tears versus saline samples. This study will provide unique insights about the role of tears in humans as well as human bonding behavior.

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The Pastel Medium: Communicating Sexuality and Promiscuity in Late Nineteenth-Century Paris

Throughout the history of art, the pastel medium has been considered a medium of secondary interest. Despite its pulsating textures, vibrant colors, and unique receptivity to touch, this medium has been recognized above all for its swiftness in stroke and subsequent ability of the artist to record images of fleeting moments and ideas almost instantaneously. The focus on the advantageous rapidity of the pastel, however, hindered the pastel medium's potential as a mere preliminary technique to working with grander mediums, such as oil paint, thus failing to recognize the prominence of pastel in capturing character. This research endeavor focuses on a very specific era with comparably high usage of pastel – late nineteenth-century Paris – and the distinctive characteristic that defines said era – the hyper-sexuality of the Parisian prostitute. The eminent presence of prostitution and consequential iconography of female sexuality in late nineteenth-century Paris defined the world of French Bohemia and seeped into the artistic exchange of the era. Although holding a traditionally subsidiary position to other historically primary mediums, the pastel medium prevailed in communicating the sexuality, sensuality, and promiscuity of the sinful female in Paris at the close of the century. Prominent artists in the nightlife milieu such as Henri de Toulouse-Lautrec and Edgar Degas and their pastel works revolving around the theme of prostitution serve as key illustrations of the distinctive ability of the ephemeral medium to capture the mood and personality – and therefore the sensual quintessence – of its subject. Through contextual and visual analysis, this research endeavor thus ultimately aims to lift the traditionally secondary pastel medium to one of impressive proportions, emphasizing its unique advantages and raising its overall credence.

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Luminescent Europium(III) Complexes for Anion Sensing Applications

Lanthanide metal complexes are useful in biomedical imaging and sensor development due to their unique photophysical properties. Such complexes consist of a metal bound to an organic ligand, promoting the antenna effect whereby the attached organic ligand transfers a portion of its absorbed energy to the metal, leading to enhanced metal emission. Europium(III) complexes, for example, are known for their luminescent properties and for their ability to act as sensors of a wide range of biomolecules. It has been shown that certain biological anions bind to lanthanide metal complexes, increasing their luminescent intensities. Using a macrocyclic tetraiminodiphenolate (TIDP) europium complex, a series of anion binding studies were performed in this study. The study was conducted in an aqueous environment, which can often cause significant quenching of the luminescent intensity of the metal complex. The binding of the metal complex by certain anions can reduce this quenching effect and allow for quantification of the anion present. It was found that the TIDP europium complex selectively

binds the oxalate anion relative to the series of anions studied, which included phosphate, iodide, chloride, fluoride, and acetate. The complex′s selectivity for oxalate has both biological and forensic significance. Further studies are underway, and their implications will be discussed.

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Religiosity and Prejudice: Bringing Allport and Ross into the 21st Century

According to Allport and Ross (1967), individuals of the same faith may nonetheless hold different religious values based on those individuals′ religious orientation: intrinsic or extrinsic. In their seminal study, they found that differences in intrinsic religiosity were negatively correlated with prejudice whereas differences in extrinsic religiosity were positively correlated with prejudice. In our current study, we are interested in determining the extent to which Allport and Ross′ findings apply to contemporary society. College students will be given two measures of their religious orientation, two measures (one explicit, one implicit) of their racial prejudice, and one measure of their willingness to volunteer to help a person of another race on campus in a future task. Given recent historical trends in which people identify themselves as spiritual but not religious, we expect that many participants will not easily be classified in terms of Allport′s two dimensions of religiosity. In addition, we predict that explicitly prejudiced attitudes will be expressed by only a few participants given the way in which such prejudice is considered largely socially undesirable in contemporary society. Whether individual differences in religiosity can be used to predict implicitly prejudiced attitudes is an empirical question to be addressed by our findings. For scholars studying religiosity, our results might suggest that previous conclusions based on research conducted during a different socio-historic Zeitgeist might need to be re-examined. In this regard, researchers might find it useful to study individuals who (a) identify themselves as spiritual but not religious, (b) spiritual and religious, and (c) neither spiritual nor religious.

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Adaptive Phenotypic Plasticity in the Hindlimb of the Cuban Brown Anole (Anolis sagrei)

Phenotypic plasticity is the environmentally induced ability of a genotype to produce more than one alternative phenotype. An experimental introduction of Cuban brown anoles (Anolis sagrei) onto small islands in the Bahamas revealed that descendants on islands with small-diameter supports exhibited significantly shorter limb length than those on islands with large-diameter supports (Losos et al., 1997), but it was unknown if this result was due to natural selection or

phenotypic plasticity. A laboratory experiment in which hatchlings were reared in cages containing either small-diameter or large-diameter supports revealed that phenotypic plasticity had a significant effect on hindlimb growth (Losos et al., 2000). We replicated and extended this laboratory study to determine first whether phenotypic plasticity in A. sagrei hindlimb growth is a repeatable phenomenon, and whether the outcome has an impact on perch use later in life. We reared two cohorts of A. sagrei hatchlings on small-diameter or large-diameter dowels in a lab setting. Measurement of hindlimb length at ten weeks of age revealed that subjects reared on broad dowels exhibited significantly greater hindlimb growth than subjects reared on narrow dowels. Subjects then were transferred to an outdoor enclosure that contained both perch sizes, and observations were made of perch use frequency. These observations were terminated after three weeks, as an enclosure design flaw allowed some subjects to move across partitions separating the cohorts reared on different dowel sizes, and skin shedding rapidly decreased the number of positively identifiable subjects. We repeated the entire experiment with new cohorts of hatchlings, and a modular outdoor enclosure design ensured the isolation of treatment groups. Results of our replicated experiments, as well as the adaptive significance of phenotypic plasticity in A. sagrei limb length, will be discussed.

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Music for Social Change in Minas Gerais, Brazil

Not only does music bring beauty into our lives, but it also challenges us to think in new and innovative ways, conquers racial, generational, and socio-economic gaps, shapes our identities, and provides job skills, and enhances our quality of life. Unfortunately, music education in American public schools is first to go when budgets are slashed, cutting out a crucial component of general education. Minas Gerais, Brazil, is far from the most popular or wealthy state in the country, but it is rich in culture. During my time there as part of the Hollis Mentored Field Experience this past summer I observed several different customs, outreach programs, and community initiatives involving the arts. Similarly to the mission of the popular organization El Sistema, in Venezuela, the programs I observed in Brazil had a keen sense for the cultural value of their musical traditions. This tradition of musical education and community involvement has a positive impact on at-risk youth by giving them a healthy and creative outlet in which to succeed. The sense of community is also significantly strengthened by these initiatives. This emphasis on music education is responsible for a large percentage of the communities' success, collective happiness, and potential for advancement.

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When Romantic Relationships Go Wrong: Self-Monitoring and Differences in Coping

Murray and Holmes (1997) found that people use positive illusions to maintain their current romantic relationships - especially when people's sense of relationship security is threatened. In our study, we are investigating whether people use negative illusions as a means of coping with the loss of a romantic relationship. We defined negative illusions as excessively negative feelings toward former romantic partners, a lack of efficacy within former romantic relationships, feelings of pessimism within former romantic relationships, and feelings of dissatisfaction within former romantic relationships. Because their romantic relationships are especially intimate and long lasting (Simpson, 1987) and their field of eligibles is relatively small (Simpson, 1987), low self-monitors (rather than high self-monitors) should be particularly distressed by failed romantic relationships and therefore be very motivated to use negative illusions. To measure negative illusions, we used the Partners' Interpersonal Qualities Scale, Relationship Efficacy Scale, Relationship Optimism Scale, and Relationship Satisfaction Scale (Murray & Holmes, 1997). We ask participants to rate not only their own former romantic partner/relationship but also the typical and worst possible former romantic partners/relationships. To measure self-monitoring, we used the Self-Monitoring Scale (Snyder, 1975) and the Revised Self-Monitoring Scale (Lennox & Wolfe, 1984). Prior to both sets of measures, participants focused on instances in which they created relationship conflict (strong constraint on illusions) or their ex-partners created relationship conflict (weak constraint on illusions). Data collection is ongoing. We predict participants are most likely to use negative illusions to cope with failed romantic relationships when constraints on doing so are weak. Additionally, this differential use of negative illusions will be more evident for low self-monitors than for high self-monitors. This current study may contribute to our understanding of self-monitoring and romantic relationships as well as benefit marriage and relationship counselors.

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Research Topics in Painting

This poster will showcase the development of a series of paintings based on my research into anachronism through photographs taken at Renaissance Festivals. Initial photographs were taken on-location at two Renaissance Festivals, and focused on performers whose attempts to re-create the world of the past were interrupted by intrusions of the modern. Special attention was given to musicians whose period clothing and instruments were at odds with their microphones and amplifiers. Renaissance and Baroque paintings provided context for the ideas generated by my photography and sketches. Work by artists including Honthorst and Terbrugghen served as

inspiration during the creation of compositions. Elements of strangeness in these classical paintings-especially those which related to imagery in my photographs-were of special interest during this research stage. In the studio, photographs were cropped, collaged, painted on, and reflected in mirrors to further confuse the time and space that the subjects of the photos were occupying. This manipulation of images generated new ways of thinking about the paintings and their underlying themes. The resultant body of work combined modern concepts and techniques with highly traditional subject matter in unusual ways. The work related to, but expanded upon, classical paintings from art history, and incorporated unexpected findings from my photography and manipulation sessions. Perhaps most importantly, creating these works also focused and defined my interests as a painter and opened my mind to new forms that my art can take. The concepts and techniques that I developed within this project were incorporated into other bodies of work as well, unifying my work as a whole and also encouraging my development as a painter outside the bounds of this project.

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Perceptions of Child Physical Abuse: The Impact of Defensive Confidence on the Use of Sex Stereotypes

In this study, we examined the role of sex stereotypes in perceptions of child physical abuse. Sex stereotypes are beliefs individuals have that are assumed to characterize all men and women. We also examined the extent to which different individuals use sex stereotypes. Participants in our study will first read one of four scenarios in which a hostile parent-child exchange occurred that culminated in the parent slapping his/her child on that child′s face. (We will systematically vary the parents′ sex and the children′s sex.) Participants will then indicate their attitudes about the parent and the child using two semantic differential scales. Participants will then complete the Defensive Confidence Scale (Albarracin & Mitchell, 2004). Our data will be analyzed using a 2 (male vs. female perpetrator) x 2 (male vs. female victim) x 2 (high vs. low defensive confidence) factorial design. We predict that consistent with sex stereotypes (e.g., men are aggressive, women are nurturing), fathers will be more likely than mothers to be seen as abusive. We also predict that consistent with sex stereotypes (e.g., boys are tough, girls are fragile), boys are less likely than girls to be seen as victims of abuse. Because people who are high in defensive confidence are open to information that contradicts their views, these people will be less likely than those low in defensive confidence to use sex stereotypes when evaluating parents and children engaged in a hostile encounter. These results may have important theoretical implications for understanding the role of sex stereotypes in reactions to parents and children in abusive relationships. Our results may also be beneficial for individuals in medical fields (e.g., emergency room personnel), school systems (e.g., teachers), and legal systems (e.g., lawyers) in sensitizing them to the effects of stereotypes on the reporting and treatment of child abuse.

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Effects of Ethnicity on Voting Behavior: A Case Study

American perceptions of ethnicity and its influence on the democratic process are evolutionary. The degree of importance to which Americans place ethnicity of candidates for public office, when voting, is ambiguous. We may see the degree of influence of candidate ethnicity on voting behaviors by quantifying voting results to particular candidates of varying ethnicities when such candidates have similar ideological views and party affiliations. White, Black, and Hispanic ethnicities of voters and candidates are recorded along with respective voting outcomes for elections within Miami-Dade County. Political ideology and party affiliation is held constant. For several such elections within Miami-Dade County, where candidates′ ideologies are equal, the level of incidence to which voters vote for candidates of like ethnicity is recorded. Holding all else equal, voting results in such instances may suggest that candidate ethnicity changes or influences American voting patterns to a high percent of such instances. If analyses indicate a high degree of incidence where voters tend to align with respective ethnicities, then dynamics of elections may become fundamentally dysfunctional. Candidates may be reluctant to run in particular districts, voters may be unwilling to vote, district or precinct boundaries may be geographically drawn out bias to demographics, and an ethnic rift between Americans may instigate prejudice in social institutions. Measuring such manifestations has important ramifications on the efficiency of American democratic processes.

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Friendship Type as a Moderator of Withdrawn Behavior and Academic Achievement in Preschool

Researchers have found that socially withdrawn children are vulnerable to both academic and social maladjustment. Researchers have found that socially withdrawn children are vulnerable to both academic and social maladjustment. Withdrawn children who display anxious behaviors are less liked than children who are not socially withdrawn (Hart et al., 2000) and socially withdrawn preschoolers display lower levels of academic competence (e.g., Coplan, Wichmann, & Lagacèè-Sèèguin, 2001). The types of friendships that socially withdrawn children have may play an important moderating role in their learning experiences in the preschool classroom. It is possible that certain types of friendships are more likely to act as a buffer than others (for example, withdrawn children who have reciprocal friendships with other withdrawn children may benefit less than withdrawn children who have reciprocal friendships with non-withdrawn children). In the present study, I investigate the association between withdrawn behavior of children participating in Head Start and their academic achievement as it is moderated by social

competence and friendship type. Our participants included 147 Head Start children, ages 3 to 5. We measured socially withdrawn behavior with a behavior questionnaire, popularity and number of reciprocal friendships with a roster and rating measure and a peer nominations procedure, and academic achievement through a direct assessment (Learning Express). In this study, I distinguish between two subtypes of withdrawn behavior as measured by the Adjustment Scales for Preschool Intervention: (a) socially reticent and (b) withdrawn/low energy. Preliminary analyses indicate that (a) both subtypes of withdrawn behavior were negatively correlated with number of reciprocal friendships, (b) socially reticent behavior was negatively related to popularity and listening comprehension skills, and (c) social competence was positively related to listening comprehension skills.

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Simulation for everyone: bringing event driven simulation to undergraduate education.

As computing platforms grow more complex and processing power tends to be transferred toward the cloud, computer simulation becomes a powerful tool for Computer Scientists. Specifically, event driven simulation of computer systems such as data centers is important to learn about scalability, resource allocation, and power consumption before investing in xpensive construction of the data centers. As a result, one of the emerging subjects for budding Computer Science students is to learn how to simulate such systems. To this end, we develop a data center simulator that demonstrates to Computer Science undergraduate students the importance and practice of simulation in the real world. Our major design targets are simplicity and clear output of results. To make the topic more attractive, we have singled out a real world implementation for the simulation based on Facebook's recently publicized data center specs. We use self-explanatory demos to intuitively demonstrate poor performance and basic aspects of queueing theory. Prior results have shown that the timeline of events and the simulation of the clock, as opposed to using the system clock, are difficult for students to comprehend. To this end, we take special care to illustrate exactly how each event is taking place by stepping through the imulation and building a simple table of events as the output. Finally, we intend to use this simulator in a class and add a real world benchmark to demonstrate the validity of simulation results. This project can prove invaluable in teaching and understanding computer simulation. To our nowledge, this is the first attempt to explain the intricacies of event driven simulation and the performance modeling behind it in a practical manner.

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"We Have Lost the State for a Long, Long Time\": The Failure of Republicans and Reconstruction in Florida, 1868-1877

Following the military conflict of the Civil War (1861-1865), a social conflict emerged in Reconstruction of the former Confederacy (1865-1877). Each southern state had its own peculiarities but Reconstruction in Florida was almost entirely unique. Unfortunately little has been researched on this era of Florida history. This study elaborates the Republican failures to consolidate the rights of blacks and their own party in postwar Florida, set against waning national will for Reconstruction. Florida had enthusiastically seceded before quickly concluding life was no better under the Confederacy. As such many were willing to legally rejoin the Union, but fewer were ready to accept the legally burgeoning status of blacks. Admission to the Union required rejoining states to draft new constitutions; Florida attempted this endeavor twice in the Reconstruction era. The first was conducted while still under strict military governorship, immediately after the war, but this document was far too conservative for the still-Radical Congress of 1865. The next attempt came in 1868 and decisively split the Republican Party of Florida. The Conservative and Radical factions of the party each crafted their own constitution. A law-and-order governor, appointed by Andrew Johnson for his narrow vision of Reconstruction, endorsed the Conservative version, while declining Radical sway at the national level assured its approval. Republicans managed to hold the state's highest office from 1868 to 1877. Compromise maintained the Republican establishment, but for this end no one was satisfied. Only under one governor did a consensus appear at hand, but he died too quickly to affect any change. Human agency alone is responsible for the tragic story of postwar Florida. Ironically Republicans, the supposed agents of change, ensured their own demise and the destruction of the Reconstruction ethic.

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Eco-Dolphin Project at Embry-Riddle Aeronautical University

Eco-Dolphin is a fleet of ecological friendly AUVs (autonomous underwater vehicles) that our team is currently building. It is named after its vehicle shape which is similar to that of a dolphin. Our team consists of 5 graduate and undergraduate students, mostly members of the SIAM student chapter at ERAU. The vehicle prototype and microprocessor controller of the first AUV will be completed in spring 2012. The underwater acoustic communication feature will be added in summer 2012. The fleet of 3 AUVs and three communication and positioning buoys is partially funded and expected to deliver in fall 2013 before the full scope of QEP (Quality Enhancement Program) at ERAU starts. Eco-Dolphin is designed to support future

environmental science research and surveillance services in littoral water. It will primarily serve as an instrument and test bed for our QEP program. The associated REU projects will involve 6-12 students who are talented in computing, mathematics and engineering in each semester.

The prototype includes the following features and will be tested in the Nonlinear Wave Lab NLWL2.

1. A Wi-Fi receiver for Eco-Dolphin AUV to communicate with the ground station when it surfaces
2. Underwater communication and positioning is obtained by three servers relaying Wi-Fi and underwater acoustic signals to control and monitor the Eco-Dolphin remotely from a ground station while it submerges
3. Measure the velocity of current by comparing the absolute velocity obtained from the acoustic positioning system and the relative velocity obtained from the IMU

Our team will present our models, analysis and computation associating with our solutions to decide the design parameters of our Eco-Dolphin prototype. For example, we will show our analysis about how to choose the proper hull size, thruster power, and ballast types, etc. Because we have to use acoustic signals for the communications under water and its bandwidth/speed are 5 magnitudes smaller than the wireless communication in air, building buoyant servers to relay the communication signals among AUVs and ground station is challenging and expensive. Although the acoustic network can only exchange small messages under water at a slow pace, with this feature, the ground station can control and monitor Eco-Dolphin AUV under water and Eco-Dolphin AUV can send its heartbeats to the ground station while it is submerged. One of the related research topics for REU is to find the optimal geometric layout of the buoys and AUV routing so that the system can cover the maximum surveillance area under its limited battery power. The interest research topics associating with the Eco-Dolphin project will attract many more undergraduate students who are gifted in mathematics and computing to participate in the related future REU programs offered by the mathematics department at ERAU.

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Civilizing the Metropole: The Role of the 1889 Parisian Universal Exposition\'s Colonial Exhibits in Creating Greater France

During the era of New Imperialism, the French state had the daunting task of convincing the French public of the need to support and to sustain an overseas empire. Stemming from its defeat in the Franco-Prussian War and hoping to regain its erstwhile global position, the French state set out to demonstrate the importance of maintaining an empire. Since the vast majority of the French people were apathetic towards colonial ventures, the French state used the 1889 Parisian Universal Exposition not only to educate the French about the economic benefits of the empire, but to entertain them simultaneously so that they unwittingly began to accept the notion of an interconnected Greater France. This exposition contained a group of colonial exhibits in which

indigenous colonial subjects, whom the exposition's organizers handpicked to come to France, showcased their daily lives and interacted with the visiting public. Visitors witnessed the daily routines of indigenous cultures and took away from the exhibits a greater understand of those who lived in the colonies. However, the vast majority of the French public who visited the expositions did not experience a shift in their mindset favoring the continuance of a colonial empire. Until they could personally see an impact of the colonies onto their daily lives, the French public remained indifferent toward the French state's colonial ventures.

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Successful year-round fertilization and development of Fundulus heteroclitus in the laboratory

The long term objective of this project is to monitor the reproductive cycle of the fish (Fundulus heteroclitus) that are currently being housed in our new aquarium facility. In a previous study, we demonstrated that the fish can spawn successfully in a laboratory environment. This was done by feeding the fish an adequate amount of fish flake food (Tetramin Fish Flake) and brine shrimp (live and freeze dried) to provide enough caloric energy for gamete formation. At this time, we are further investigating how many eggs are produced per female in each tank, as well as, the successful fertilization of eggs. Fish are housed in 10 gallon tanks, and maintained at stable conditions (water temperature at 26 . 2° C; salinity 28-30ppt; 14hr light and 10hr dark photoperiod; fed on average 3-4 times each day). Experiments are being carried out to demonstrate: 1) that fish are able to transition from a state of regressed ovaries from the wild and can remain reproductively active throughout the year in the laboratory; 2) successful fertilization of eggs using in vitro fertilization; and 3) successful development of embryos to adults. With the current set up, we were able to successfully collect artificially and naturally fertilized eggs, both developing into reproductively active adults. The data collected will provide information on optimal laboratory conditions for Fundulus heteroclitus spawning and development success. In addition, this study will serve as a protocol for establishing a standard husbandry procedure for our future experiments.
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On the Market: Exploring Similarities and Differences of Self-Presentation in an Online Dating Community

Recently, online dating sites have become more popular, with members numbering in the millions (Rudder 2011). This exploratory study of online daters investigated the similarities and differences among members′ self-presentation on a popular, free online dating site, OkCupid.com. Drawing on Erving Goffman′s (1959) theory of impression management, Edward E. Jones′ (1990) five strategies of self-presentation, and theories of ‵Doing Gender″ (West and Zimmerman 1987) and "Doing Difference" (West and Fenstermaker 1995), I determined (a) how self-identified black and white/male and female members use varying self-presentation techniques in their online dating profiles; (b) the similarities and differences between their presentations of self, and (c) their patterns of use of E.E. Jones′ five strategies of self-presentation (i.e., ingratiation, self-promotion, intimidation, exemplification, and supplication). Participants were selected using a simple random sample. Through a content analysis of online daters′ profiles (N=140), both qualitative and quantitative data was collected. Data was analyzed using SPSS. Both univariate descriptive statistics, crosstabulations, and one-way ANOVA tests were performed. The study indicated that sex was not a statistically significant factor in determining one′s self-presentation strategy; However, race was statistically significant. It was found that whites, particularly white females, most frequently employed strategies of ingratiation, exemplification, and supplication. Blacks, particularly black females most frequently employed strategies of self-promotion and intimidation.

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The role of nuclear Pif1p during meiosis

Telomeres are the physical ends of eukaryotic chromosomes and consist of a noncoding repeated sequence. Telomere length may serve as a biological marker for cellular aging. Once telomeres are critically shortened, cells stop dividing, a stage known as replicative senescence. Telomere addition occurs due to the function of the enzyme, telomerase. Human somatic cells do not typically express telomerase, thus, telomeres shorten with each division. In contrast, the budding yeast, Saccharomyces cerevisiae, does not undergo cellular senescence because the telomerase enzyme is expressed in every cell cycle. Pif1p is an evolutionarily conserved helicase that serves as a negative regulator of telomerase. Pif1p also helps to maintain mitochondrial DNA. Loss of Pif1p in mitotic cells results in inappropriate addition of telomeric sequences at double stranded breaks (DSB). Since DSBs are induced during meiosis to promote homologous recombination, we wished to determine whether Pif1p plays a role during this process. Pif1p exists in two forms: nuclear and mitochondrial. Wild type S. cerevisiae strains express both forms of Pif1p. However, strains containing the pif1-m1 allele only express the nuclear form of Pif1p, while strains containing the pif1-m2 allele only express the mitochondrial form.
We created pif1-m2/pif1-m2 diploid strains to examine the effect of loss of the nuclear form of Pif1p on meiosis and sporulation. Our results indicate that pif1-m2 strains have reduced sporulation efficiency relative to wild type strains. These data suggest that the nuclear function of Pif1p is not essential for meiosis. We are currently determining whether spores produced from a pif1-m2 mutant are viable and show the expected segregation patterns. We are also

quantifying Pif1p expression levels in wild-type strains undergoing meiosis. To determine expression levels of Pif1p throughout meiosis, cells will be synchronously sporulated and protein samples will be examined by western blot analysis.
Supported by NIH-NIGMS MARC: T34 GM008021, Barry University

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You can lead an egret to water, but you can\'t make him forage: wading bird species richness and abundance relative to fluctuating water levels at a wetland restoration site

Wading birds use various environmental and social cues when choosing foraging and nesting sites. Previous studies in Florida wetlands have shown that the abundance and species richness of wading birds is inversely correlated with water stage while the effect of the fluctuation of water levels on abundance has mixed results. I predicted that a) species richness and abundance would be greatest at lower water depths, b) species richness and abundance would be greater during short-term periods of receding water levels compared to rising and stable water levels, and c) the relative abundance of Snowy Egrets, Egretta thula, to Great Egrets, Casmerodius alba, would be greater at lower water depths. Thirteen species commonly found at Emeralda Marsh Conservation Area (EMCA) in central Florida were included in the study. Total species richness, total abundance of wading birds, and abundance for seven individual species was compared across four ranges of water stages and three fluctuation phases using two-factor ANOVAs. The relative abundance of Snowy Egrets to Great Egrets as water level and fluctuation phase changed was also analyzed with a two-factor ANOVA. The results indicated that most wading bird species are using low water stage as an environmental cue for optimal foraging, but are not affected by short-term fluctuations in water levels.

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Comparison of salinity and phytoplankton abundance along the US Coastline

Phytoplankton samples have been collected and analyzed for over 10 years by the Plankton Montoring Network (PMN, part of the National Oceanographic and Atmospheric Administration). This database is publicly available. Several species were analyzed for abundance as a function of salinity to determine if salinity correlates with certain phytoplankton blooms. This analysis was done for sampling sites on coastal regions of the Gulf of Mexico, the Atlantic seaboard, and the sites in the Pacific (Seattle and Alaska). The results of the comparison are reported.

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An Acoustic Analysis of Individual Signatures in the 'Whinny' Vocalization of the Domestic Horse

The ability to identify individuals at a distance is important in territorial interactions and in maintaining cohesion among members of a dispersed social group. Long-distance vocalizations of mammals and birds propagate information quickly in many environments, and for a number of species these calls have been shown to encode the identity of the caller. Horses (Equus callabus) use a loud, long-distance vocalization termed a 'whinny' to communicate with distant group members. In a previously published study the acoustic structure of this call was found to differ significantly across a large group of subjects. However, the degree to which a given subject's whinnies differed from those of other subjects was not reported. To address this problem we recorded whinnies from 15 domestic horses under standardized conditions of visual isolation, and selected ten randomly chosen calls of good recording quality from ten subjects. These vocalizations were analyzed using a spectral analysis method known as 'cross-correlation'. This technique takes into account all of the frequency X time information in a call and produces a correlation coefficient for each pairwise call comparison. We tested the hypothesis that, if whinny acoustic structure reliably encodes individual identity, then correlations among a subject's own whinnies should be significantly greater than correlations between a subject's whinnies and those of other subjects. Results revealed that, for all ten subjects, the median within-subject correlation was significantly greater than the median between-subject correlation. These findings provide strong support for the presence of individual vocal signatures in the long-distance communication signal of horses.

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Hidden Trends in Everyday Computing

Everyday, hundreds of thousands of interconnected computer systems drive the near instantaneous availability of data. Driving the data through those systems is the repeated execution of many individual computer programs. The practical management of those programs and how they fit within the larger computer system, is the basis of the IT industry. Many techniques exist for monitoring these programs, most involving some sort of logging and historical graphing. What trends exist, however, in the execution of those programs when we go beyond simple logging? This project seeks out those hidden trends in the program execution of the various software components that make up the larger whole of computer systems at Valencia College. These systems are critical to the daily operation of the college and include Financial Aid, Registration, Finance, and Accounts Receivable, among others. Using various statistical

modeling techniques, not only do we hope to find patterns in how the programs comprising these systems work together, but ultimately, how they might work together better. The data scraping and analysis for this project are done within a small team using freely available, open source tools. However the concepts utilized are easily scalable, and can be applied using proprietary or closed source tools as well.

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Assessing Reef Population Connectivity through the Integral Projection Model

Marine reserves have been frequently utilized by fisheries management as a sanctuary for breeding stock. These reserves, in combination with an understanding of target species life history, have been valuable tools for effective harvesting regulations. Differences in larval experience (i.e. nutrient rich or poor water) have been shown to shape phenotypic performance (quality) that carries over into adulthood. These experiences modify physiological features such as growth rate, and are dependent on the distance and the route taken by the larvae from their natal source. However, it is unknown how variations in proportion of larvae with local (high quality) or distal (low quality) origins influence intraspecific competition. Mathematical models have been frequently implemented for potential explanations and predictions in conservation efforts. In addition, the Integral Projection Model (IPM) has demonstrated its value with respects to populations structured on continuous variables such as size, and will be implemented for a reserve of the temperate reef fish, Forsterygion lampillum. Various forms of size and quality dependent competition will be simulated to determine the influence of larval source populations on the dynamics of a single F. lampillum reserve population. Results suggest that heterogeneity in larval quality induces unintuitive population dynamics, which has the potential to impact fisheries management.

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A Comparative Study of Headbob Display Structure in Two Dewlap Color Forms of the Green Anole, Anolis carolinensis

Displays evolve through the ritualization of behavior patterns and occur in all sensory modalities, particularly as visual and acoustic signals. A commonly observed lizard visual display, termed a 'headbob', involves a series of rapid head movements in which the head is jerked quickly up-and-down in a stereotyped sequence. Display structure often possesses substantial interspecific (and sometimes population-level) variation, and has been well studied in lizards of the genus Anolis. The green anole, Anolis carolinensis, exhibits a widespread red-dewlapped (RD) form

throughout the southeastern USA, but includes a gray-dewlapped (GD) form that is restricted to southwest Florida. In light of known differences between the two forms in coloration, allozyme allele frequencies, and thermal tolerance, we hypothesized that GD males would differ from RD males in headbob display structure as well. To test this hypothesis we quantified 308 displays performed by a total of 33 males (25 GD and 8 RD). Displays were categorized as Type A, B, or C using a decision criterion derived from published data. Results showed that Type A displays differed significantly between GD and RD males in the durations of six of eleven display units, supporting our hypothesis. By comparison, two of eleven display units differed between GD and RD males in Type C displays (we did not record Type B displays from our RD subjects, so no comparisons could be made for this display type). Similar to findings in comparative population studies of morphology, genetics, and physiology, our results show that stereotyped display behavior distinguishes the gray-dewlapped population of A. carolinensis from other populations of this species.

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Polyphenolic Compounds of Grape Extract as Potential Inhibitors of Cholera Toxin

Vibrio cholerae causes cholera, a significant water-borne diarrheal disease. Cholera toxin (CT) is the main virulence factor released from Vibrio cholerae. CT binds to the surface of the target cell and is internalized into a membrane-bound compartment. It then unfolds and passes through a membrane pore to enter the cytosol where it activates G protein by ADP-ribosylation. The G protein then activates the cell's adenylate cyclase enzyme, which produces cAMP in high amounts and consequently triggers an efflux of chloride ions into the intestinal lumen causing watery diarrhea. An inhibition of these cellular events will block the activity of CT and the cholera disease. The Teter lab has recently shown that grape seed extract blocks CT activity against cultured cells. The goal of this project is to identify compounds in grape extract that are responsible for toxin inhibition and to determine how inhibition occurs. Twenty common polyphenolic constituents of grape extracts were individually screened, and twelve of them were found to at least partially block the effect of CT. They did not block toxin binding to the cell or toxin unfolding. To monitor in vitro CT activity, we synthesized diethyl amino-(benzylidineamino) guanidine, a substrate that is ADP-ribosylated by CT. Two compounds inhibited CT activity. Our work shows that it is possible to identify individual toxin inhibitors from grape extract and to determine their mechanism of inhibition. Our long-term goal is to have a therapeutic against CT with a defined mixture of plant polyphenolics and a known mechanism of inhibition.

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A Comparative Study on the Dysmorphological Features of FAS Across Various Animal Models

Every year thousands of children are born with severe deformities and neurological abnormalities; victims of a disease that is 100% preventable. Parental irresponsibility is the basis for Fetal Alcohol Syndrome, or FAS, affecting children who have been prenatally exposed to alcohol. Despite it being a condition observed only in human populations, the effects of pre-natal alcohol exposure share similar patterns across a variety of different species. A wide spectrum of birth defects have been clinically observed and include, among the most common, short palebral fissure length, oral clefts, smooth philtrum, and mental disabilities. The purpose of this research is to determine specific patterns of developmental abnormalities common to the organisms studied, as well as distinguish species- specific symptoms. Literary review of studies dealing with the consequences of fetal ethanol exposure was performed. The data was collected and organized according to each organism and then compiled for comparison. FAS-like symptoms were observed in medaka fish, zebrafish, drosophila, chicken, rats, mice, and humans. The results show that craniofacial malformations and central nervous system abnormalities were the most commonly observed defects across all subjects. Among the species-specific symptoms observed were cyclopia, retrognathism, oral clefts, inner ear deformities, and others. The data suggests that fetal alcohol exposure results in similar developmental problems in different organisms. The relevance of such findings is essential for further research on determining the biological mechanisms affected by ethanol and ways to reverse the effects.

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Representation of Breastfeeding in the United States: An Analysis of American Newspaper Articles

The bond between a mother and child is said to be bounded by forces cemented even before birth. Breastfeeding is noted not only as a means of immunity and nutrients but as a time for nurturing and communicating on a nonverbal basis with mother and child. Yet, the idea of breastfeeding has become less palatable for many first time mothers. The intriguing piece to this puzzle is that despite strong medical advisement it still persists. Drawing on sociological research on breastfeeding and executing a systematic content analysis of newspaper articles from the top ten newspapers in United States this paper sets out to investigate the possible reasons behind the low prevalence rate of breastfeeding in the United States. By systematically assessing the nature of the content in American newspapers a general consensus on public opinion will be devised. Regardless of the benefits that are offered by breastfeeding for both mother and baby

many mothers are not breastfeeding exclusively for the recommended duration. It is predicted that the low prevalence rate among breastfeeding the United States is contingent upon public opinion and social factors such as socioeconomic status and educational background to name a few. If we can tackle some of the reasons why breastfeeding is not widely preferred, then it is possible to work to correct these issues.

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Lichen Biodiversity of Northwestern Polk County, Florida: Implications for Air Quality.

Lichens are excellent indicators of atmospheric air quality because even relatively low levels of common air pollutants can significantly alter the physiology, composition, growth, distribution, and reproduction of lichen communities. This long-lived, cosmopolitan group of symbiotic organisms is frequently used to monitor air quality throughout the World, yet few attempts have been made to survey lichens in upland habitats of central Florida. In this study, epiphytic lichen floras were surveyed in three distinct habitats: rural (Lakeland Highland Scrub Preserve), suburban (Florida Southern College campus), and metropolitan (downtown Lakeland, Florida). Lichen species were photographed and measured, then collected and preserved in the Florida Southern College herbarium. Surveyed specimens were then taxonomically identified using a North American species key. To spatially display results, a GPS point was recorded for each specimen and imported into ArcGIS. Some of the common species collected in our region are: Bumpy Ramalina (Ramalina complanata), Candleflame Lichen (Candelaria concolor), Common Button Lichen (Buellia stillingiana), Dirinaria Lichen (Dirinaria picta), Southern Strap Lichen (Ramalina stenospora), Streaked Rosette Lichen (Physcia atrostriata), and White Fringe Lichen (Heterodermia albicans). In general, our results were consistent with previous studies; we found an increasingly diverse and abundant (i.e., healthy) lichen community as we moved further away from the urban center.

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An analysis of parental income, education level, and distress in parents of children with special needs.

Research has shown parents of children with Down&#65533;s Syndrome experienced higher divorce rates when the parents had less than a high school education. However a gap exists in the literature related to parents of children with other special needs. This research project will analyze the relationship among parent&#65533;s education level and income in relation to parental distress of parents of children with Autism Spectrum Disorder, Down syndrome, Cerebral Palsy,

and multiple medical disabilities. We have collected data from over 300 participants who contributed data to the Family Adjustment Measure Project (FAM) conducted online via www.surveymonkey.com. Participants completed the Family Adjustment Measure, Relationship Assessment Scale, The Perceived Stress Scale, and an Informational Questionnaire. Through examination of the data using regression analysis and analysis of variance, we intend to discover significant relationships and differences among parent&#65533;s education and income level, their individual distress, relational distress and parental distress.

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Hogarth's Influence on Gin Laws: Art Influencing Alcohol in 18th Century London.

There is little research to prove that art has had an impact on bringing about social change through legislature. Art, while used as propaganda was often influential but inevitably inadequate at effecting serious change in legislation. This presentation will show how William Hogarth, an eighteenth century artist, brought about legislative and social change through his artwork. It is stated that "No artist has come to define a period of British history as powerfully and enduringly [as Hogarth]" (Riding, 12). His etching Gin Lane was a satirical piece about the booze embattled lower class in London. Eighteenth century London was riddled with alcoholism, poverty, and disease. The period of time during which gin overwhelmed the goodness of the people was referred to by scholars as the "gin epidemic." His prolific piece of artwork functioned to bring to light the many follies and vices of lower-class London. After two failed campaigns to clean up London, Hogarth endeavored to attach his artwork to a campaign designed to bring about social reform in London. His influential work was integral in the passing of crucial legislation that inevitably cleaned up the streets of London and prepared its people for the dawning of the industrial era.

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Genetic Investigation of Limbal Squamous Cell Carcinoma in Haflinger Horses

Squamous cell carcinoma (SCC) is the most common cancer of the equine eye and the second most common tumor of the horse overall. SCCs frequently occur in the nictitating membrane and the limbus. The Haflinger breed, which was developed in Europe during the late 19th century, appears to be overrepresented in this disease, with a high prevalence estimated to be between 25-69%. Haflinger horses presented to the veterinary hospital at the University of Pennsylvania with a complaint of Limbal SCC will be examined by a board certified veterinary ophthalmologist.

Information from the examined horses will be utilized to perform a pedigree analysis in order to investigate a potential mode of inheritance. We will then take a candidate gene approach to investigate two genes (p53 and cyclooxygenase-2) previously implicated in SCC in the horse and other animals. It is well established that ultraviolet radiation is the most plausible carcinogenic agent causing mutations and overexpression of the tumor-suppressor gene, p53. This gene is thought to play an important role in all ocular SCC development in many animals. High levels of Cox-2 expression have been detected in many human and veterinary neoplasms including SCC of the head and neck. Two single nucleotide polymorphisms (SNPs) in p53, identified in other cancer tissues in the horse, will be investigated for association with LSCC. In addition, we recently performed RNA sequencing for another equine ocular study and have identified two SNPs flanking Cox-2 (namely ECA 5:23,257,099A>T and ECA 5:23,271,174T>A). We will design PCR primers and RFLP assays to genotype these four polymorphisms when DNA becomes available. This work will provide us a better indication of prevalence in this breed as well as contribute to the knowledge of p53s and Cox-2s role in the genetics of LSCC.

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Computational Investigation of Available Resources for Natural User Interaction

Natural Interaction (NI) enables users to interact with software in a more natural way providing users with an immersive experience. This immersion allows them to engage software as if it were conscious or tangible using casual gestures and freely talking. Potential uses for the existing technologies are numerous including HCI, robotics, educational use, surveillance, motion capture, people/object tracking, 3D scanning, etc. The creation of the inexpensive Kinect sensor array provides researchers and educators with a powerful tool for exploring NI. The predominate development libraries available which take advantage of the Kinect hardware and allow software developers to create an NI experience are Prime Senses OpenNI/Nite, and Microsoft's Kinect for Windows SDK. While both of these allow users to create applications they both still require a fair amount of research to get started. This forces developers to have to work through the low level technicalities of 3D-Depth Sensing imagers (i.e. having to manually take raw camera data and depth sensory information and generate a depth map). Two relatively inexpensive development environments which account for this issue are Omeck Interactive's Beckon SDK and SoftKinetics iisu SDK. This will be a practical investigation of the advantages and disadvantages of each of these gesture interaction development platforms. These are the criteria used to evaluate each SDK: gui interface design, ease of use, installation difficulty, platform dependence, skeletal tracking, joint accuracy, prebuilt gesture libraries, audio recording, and speech recognition, color video stream, license type, gesture recognition, support for motor/tilt, sensor support, languages supported, Virtual Machine support, and scene recreation support via case studies or some benchmarks, such as Kinoogle. This poster will present an assessment of two advanced gestural interface development kits available for creating Natural Interaction Applications using Microsoft Kinect tm like hardware platforms.

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Can a color-sound synesthetic experience be induced through classical conditioning?

Synesthesia is a sensory phenomenon in which there is a cross-activation between or within modalities such that a synesthete will experience one sensation through the perception of another. The prevalence of synesthesia has been reported to be as high as 4% of the population (Simner et al., 2006) and an understanding of it could shed light on some of the most difficult problems in understanding how the mind works (Ramachandran & Hubbard, 2005). The purpose of this experiment is to better understand the condition by generating a method for inducing a synesthetic experience. In other words, this experiment attempts to condition non-synesthetes to experience a form of synesthesia using a simple classical conditioning paradigm. The hypothesis of this experiment is that if a specific sound representation is paired consistently with a specific color representation, then the presentation of the sound alone should result in the perception of the color. The hypothesis is supported by the theories of Hebbian learning and classical conditioning, as well as examples of cross-modal learning. The experiment has two groups, experimental and control, and uses a pre-test post-test design to isolate the effect of the conditioning procedure. The test being used is a variant of a Stroop test designed to see if the participant is truly experiencing synesthesia (Ward, 2006). Thus, participants will take the Stroop test, and then one group will undergo a conditioning training session in which the tone pitch is highly predictive of a particular color. The second group will also receive training, but the tone will not be predictive of the color. Both groups will then take the Stroop test again to see if the conditioning session affected responding differentially across the groups. The expected results are that the experimental group will increase in response time during the Stroop test in comparison to the control group. This will suggest that the conditioning procedure generated a genuine synesthetic experience on the participant in the experimental group. A post-test questionnaire will be administered to evaluate the subjective experience of both groups. Synesthesia has been found in three groups: (1) people who had it since childhood, (2) developed it through brain damage, and (3) experienced it under the influence of hallucinogens (Grossenbacher & Lovelace, 2001). The success of this experiment would suggest the annexation of a fourth group and a new method for understanding and studying synesthesia and the mental/neural faculties involved.

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Social Entrepreneurship: Innovating Toward Sustainability

Social entrepreneurship can generally be seen as a term associated with initiatives that proactively address social or environmental issues through delivery of a product or service that

directly or indirectly catalyzes social change. To ensure that change is sustainable, a large part of what social entrepreneurs do is to challenge or disrupt existing institutions. As used here, the term institutions focuses on 'taken-for-granted' collective behaviors such as consumption that dominate daily routines. Excessive consumption, environmentally unsustainable practices, and a culture of individual private gain over shared community or public benefit are just some of the institutionalized behaviors that social entrepreneurs seek to change. Social entrepreneurial initiatives (SEIs) are influenced by local conditions both in the opportunities they have to address a social or environmental need and in the regulatory architecture that affects their form. One of the most powerful ways that social entrepreneurs are able to bring about change is by challenging accepted ways of conducting business and demonstrating alternatives. Our poster focuses on demonstrating 'proof of concept'-that is, showing specific examples of local and global businesses that exemplify SEIs that are innovative ways to promote greater sustainability and the protection of our environment. Our poster will include examples of innovative approaches to electronics recycling, programs to decrease highway congestion, and the construction of environmentally friendly hotels and resorts.

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Oscillating salt water jet

A jet of salt water in fresh water oscillates in the same manner that a mass attached to a spring oscillates. This work describes the physics of the oscillating jet using a heuristic inviscid fluid model based on Bernoulli\'s equation. The model captures the mechanism of the oscillation, and aims at intuitively presenting the modelling of oscillatory fluid flows to an undergraduate audience.

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El "Derecho al Olvido" - The "Right to be Forgotten" : A comparative analysis of US and EU internet privacy law

Since its inception, the Internet has had a significant impact on business, communication, and everyday life. As a response to the growing importance of life online, national governments have been slowly developing a legal framework to tackle the growing liabilities and threats that the Internet can pose to their citizens. After a thorough analysis of government documents, law review articles, court cases, and international news articles, this study compares the parallel developments of privacy law in the United States (US) and European Union (EU), taking into account the two regions' differing histories, both political and legal, and the implementations of privacy law on the Internet, with a particular focus on the potential implications of the "right to

be forgotten" proposed by the EU. Despite their many similarities, the US and EU have very different approaches to Internet privacy law and data protection. While US interests lie with free speech online and personal freedom, the EU remains concerned with preserving its citizens' personal dignity and private data. To combat the increasingly invasive nature of the Internet, the EU has recently introduced legislation based on a Spanish law that gives citizens the "right to be forgotten", effectively allowing users to have potentially negative information about them taken down upon request. Though well intentioned, the proposal faces several obstacles, including vague procedures for enforcement, troubles with jurisdiction, and violent opposition from US-based Internet companies, which have ignored threats from European national governments. Because of these problems, a similar US proposition is unlikely.

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Leading Out Loud (L.O.L.):YWLP's Campaign to Draw Lines Against Bullying and Harassment

Our objective is to address the gap within the literature by conducting case studies of the Young Women Leaders Program (YWLP). In particular we will study research participants that are regularly involved in the mentoring sessions and look at how they regard issues of harassment, digital literacy, and social responsibility. This research addresses how girls imagine themselves as leaders and how they feel about standing up against harassment and bullying. Our proposed research will test the hypothesis that when girls are directly instructed on leadership and bullying prevention they are more likely to take action against aggression by their peers. We will measure their attitudes toward leadership and bullying through pre and post surveys. This research will be conducted in three Seminole Country Public Schools: Tuskawilla, Lawton Chiles, and South Seminole, through research participants that are involved with the UCF Women's Studies mentoring program, Young Women Leaders Program. An analysis of these interviews and surveys will yield the students experiences with bullying within their individual schools and will may even challenge the assumptions that are associated with bullying. The research participants will be recruited from the regular YWLP program, though other than their decision to consent to research their activities will remain the same.

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Allometry and Morphological Response to Queenlessness in the Florida Harvester Ant, Pogonomyrmex Badius

In an effort to understand the distribution and ecology of native ant species, an in depth investigation must be conducted of all aspects of colony life history and reproduction. Evolution acts upon ant colonies as a singular organism and their fitness measured as the colonial ability to produce winged sexuals (alates). Queen absence in the polymorphic species Pogonomyrmex badius engenders a quantifiable change in the ovarioles (singular units of an insect ovary) of uninseminated worker ants and the subsequent production of haploid male alates. No studies regarding the Florida harvester ant have verified this phenomenon or the quantifiable changes in reproductive morphology associated with it, but the relation has been observed in other hymenoptera. In order to quantify the effects of queen absence three replicate colony fragments (n=500) were established with a uniform 35:465 major to minor worker ratio (mimicking the natural average of 7:100). Fragments were observed until the production of larvae during week four and samples of workers were removed from each colony fragment and a queenright control colony at regular intervals (n=5, 1:4 major to minor ratio), and larger samples (n=10; 5 per caste) were removed at week four. Each worker was dissected and ovaries examined for several morphological characteristics: the length of the largest oocyte (a cell in the ovary preparing for meiotic division), the number of vitellogenic (yolk bearing) oocytes, and the number of ovarioles present. Data yielded several interesting results indicating a response to queen absence and the production of haploid offspring, an increase in both oocyte length and the number of yolk bearing oocytes, and an allometric relationship between worker size and ovariole number. Research of this nature fills a gap in our understanding of superorganismal ontogeny in P. badius and the functional potential of undifferentiated ovaries in colony workers.

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Osprey Flight Path

Osprey Flight Path (OFP) is designed as an expandable mobile application that allows its users to glide quickly and easily across campus. Imagine the first day of a freshman who tries to find his or her way not only to campus but between classrooms as well. With the latest technologies such as Global Positioning System (GPS) and smart phones, it is easy to get to campus from his or her apartment by simply following the suggested routes. However, once on campus, the freshman has no automatic guiding system anymore. The existing guiding systems such as GPS devices and Google Maps do not suggest routes between buildings on campus. OFP is therefore created to fulfill such needs of students. By allowing users to plot their starting building and the destination building with a user-friendly graphic interface, OFP uses the efficient A* search algorithm to find the shortest path from one building to another along a campus's walkways such as side-walks, bridges, and other university/school specific modes of transportation. This path is then displayed point-by-point on the school's map so that the user can easily follow the route as shown on a mobile device. It is currently being designed for implementation at University of North Florida, but can be modifiable to be used elsewhere and be expanded based on available support and interest by the community. This project has won the first place award in the 2011 School of Computing Student Symposium at University of North Florida.

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An Examination of the Prejudicial Value of Visual Evidence in the Context of a Criminal Court Case

Federal Rule of Evidence 403 requires the probative value of evidence to substantially outweigh any prejudicial value. However, the Rule 403 objection is typically used only as a fallback objection and is easily overruled. In fact, past courts have opinioned that crime scene photographs hold very low prejudicial value. The present study sought to empirically investigate the prejudicial value of visual evidence by examining the influence of the presentation of photographs on mock jurors' emotions and verdict decisions. 300 participants acted as mock jurors by reviewing case materials from a recent murder case and providing feedback concerning different aspects of their verdict decision. Included with the case materials were either graphic photos, neutral photos, or no photos. Participants reported their emotional state before and after review of these case materials using the PANAS-X (Watson & Clark, 1994), a well-established emotional-state questionnaire. The presentation of graphic visual evidence had a significant influence on participants' emotions. Specifically, those viewing the graphic photographs experienced significantly greater increases in both sadness and surprise than participants viewing neutral or no photographs. The results of this study suggest that graphic visual evidence results in heightened juror emotionality. When heightened levels of emotion are involved in the decision making process, less cognitive resources are available to make well informed and fully developed decisions (Clore, Schwarz, & Conway, 1994; Greene & Haidt, 2002; Niedenthal, 1990; Schwarz & Clore, 2003). When the probative value of the evidence does not outweigh the potentially prejudicial nature of the jurors' heightened emotionality, the fairness of the court proceedings may be questioned, and issues of the defendant's right to a fair trial may be raised.

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Determinants of Consumers' Willingness to Buy Locally Grown Produce in Greater Miami

The benefits of consuming local produce range from promoting the local economy to an increased overall health and lifestyle. Though these factors make locally grown produce (LGP) a valuable contribution to society, local produce is not as prevalent and available to the consumer as it has the potential to be. This study aims to determine factors that influence consumer's willingness to increase the purchase of LGP in the Miami region. We employ a choice-theoretic economic model to identify demographic, produce-characteristic, and perception factors which influence the consumer behavior of local food consumption. We conduct an intercept survey of

250 consumers while they are shopping at local groceries and farmer's markets. The data is used to estimate a logistic regression of shoppers' overall willingness to buy more of LGP. The preliminary results suggest that a significant number of consumers are in fact aware of the health and environmental benefits of LGP and are willing to buy them as well. Higher costs of local food have been indicated by some respondents as a barrier. Local and state officials may provide further support to make LGP more widely available and affordable.

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Restriction enzyme assays of the allosteric effects of Ametantrone and Ametantrone derivatives on the binding of DNA Polymerase I to PhiX 174 RF DNA

DNA Polymerase I plays an integral role in DNA replication and repair. It has been shown that DNA Polymerase I binds with high affinity to unusual sequence structures of PhiX 174 RF DNA such as nucleotide sequences that form cruciforms and GCGCGC sequences. Restriction enzyme assays have been utilized previously to map the binding sites for a series of derivatives of the anticancer drug Ametantrone, a GpC specific anthraquinone, to PhiX 174 RF DNA. This research showed that modulating the anticancer drug side chains affect binding of the molecule to PhiX RF 174 DNA. In this study we are examining the effect of drug binding on the binding of DNA polymerase I to both supercoiled and relaxed forms of PhiX 174 RF DNA. Using restriction enzyme activity assays, results suggest that the presence of bound anthraquinones alters the binding of DNA Polymerase I at some nucleotide sequences but not at others. For example, the presence of Ametantrone appears to partially counter the effect of DNA Polymerase I at the Alw 44 restriction enzyme site (GTGCAC) and the presence of the hydroxyethoxyethyl derivative of ametantrone more strongly alters the effect. This study provides insight as to how drugs may affect the activity of DNA Polymerase I on DNA and suggests that altering drug structure will mediate the effects.

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Child Trafficking in South America for the purpose of sex exploitation: Argentina as a case study.

The scholarly question that this project aims to address is what factors allow child trafficking to exist in South America, especially in Argentina, for the purpose of sex exploitation? I have researched Peru and Brazil for child trafficking for sexual and labor exploitation and these countries serve as a comparative study. The focus of the paper is in Argentina and the internal trafficking, rather than the trafficking of children outside of Argentina. Human Trafficking is a

business in the black market and as any business the reason why it exists is mainly because of poverty. However, I want to find out the reasons why children get trafficked, is it just due to poverty? Is there a cultural aspect behind it? The poster will display pictures of children from Peru, Argentina and Brazil that have been taken by local NGOs that I have contacted as well as pictures that I have taken myself. None of the pictures show any victimization such as children been beaten, but will show the conditions in where the children work or live in. One of the pictures, for instance, shows a child playing in the cemetery, because she has no adult supervision-which is one of the reasons why child trafficking exists in South America- as well as many pictures of children washing cars, or begging for money in the streets of Lima, and Brazil. It will also display a comparison table showing the statistics on the percentage of child labor and sex exploitation in all three countries. Moreover, a percentage of children that have been trafficked and rescued in 2011 will be displayed in the poster as well to give an idea of how big this issue is in South America. I will include other statistics that are fundamental for the research project in the poster.

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Promises: Progenitor Endothelial Cells as a Marker of Endothelial Injury and Repair in Sepsis

Sepsis, a severe illness that affects thousands of patients annually, continues to pose an increasingly imminent problem for healthcare professionals. Sepsis is an illness resulting from the invasion of normally aseptic parts of the body by microbial agents (2). The onset of sepsis can eventually lead to a diagnosis of severe sepsis which poses an even more detrimental problem to both parties: patient and physician. Sepsis incidents total over 700,000 a year in the United States and the annual financial cost of the disease totals approximately $16.7 billion (1). Per each case, patients can expect a hefty cost of $22,100 (1). Mortality neared 30% and incidence is expected to increase yearly (1). More studies are required if the issue of severe sepsis is to be minimized. The purpose of this project is to observe the impact of endothelial cells in the onset and diagnosis of sepsis, while following patients through the illness to collect certain data. One, utilize side-stream dark field microscopy technology to observe the speed of microcirculation and determine whether medications impact the flow of red and white blood cells in patients. In addition, the project aims to provide further support for the belief that sepsis causes microcirculation variances and that oxygenation of blood cells differs when sepsis occurs. The first role of the student is to consent patients for clinical study. The patients will be followed and microcirculation videos will be taken for three days, with blood and urine samples being collected for 3 consecutive days as well. Once the videos are collected, the student will analyze the videos using AVA video technology. The blood and urine samples will be analyzed by senior biological scientist Ricardo Ungaro. After video analysis and Mr. Ungaro's analysis, comparative work will be done to determine the effectiveness of the project.

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Projecting Grandeur: President de Gaulle's State Visits of April 1960 in Historical Perspective

My overall research focuses on the role foreign policy played in legitimizing the French Fifth Republic during its first years, 1959-1960. I argue that French President Charles de Gaulle employed foreign policy in the service of gaining public support for his new government and the new French Republic. Many historians have argued previously that his foreign policy of grandeur, as it came to be called, was used to recast international politics and France's role in them. Scholars have commonly seen his foreign policy as striving to thwart the rigid divisions of the Cold War and, in the process, regain French prestige and status. My work diverges from these previous interpretations by arguing that de Gaulle's foreign policy was meant to serve his broader domestic goals, not international politics. I see foreign policy within a broader context and inseparable from his many domestic constraints and initiatives. Also, my study puts his foreign policy into the context of his larger aspirations to precipitate constitutional reform, thereby ending the Fourth Republic and ushering in the Fifth. With this in mind, this poster presentation will serve to highlight one aspect of de Gaulle's foreign policy: his official state visits to the United States and the United Kingdom in April 1960. The state visits have largely been overlooked amongst historical works on Gaullist foreign policy. Yet, as the poster will serve to demonstrate, the state visits were central to de Gaulle's goal of garnering prestige for the French Republic and fostering a perception of national renewal under his stewardship. De Gaulle exploited the opportunities to shape public opinion, both domestically and in the host countries. These efforts, as my research reflects, helped foster public support for the new regime and, by portraying renewal, further discredit the Fourth Republic.

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Intermittent Hypoxia to Condition Neural Progenitor Cells in Transplant Strategies

In vitro exposure of neural progenitor cell (NPC) populations to reduced oxygen, or sustained hypoxia (e.g. 3% versus 20% O2) can increase their proliferation, survival and neuronal differentiation both in culture and following transplantation into the brain. Intermittent hypoxia, a known stimulus of neuroplasticity, was recently shown to increase in situ proliferation in the subventricular zone—a persistent germinal zone of the postnatal mammalian brain. The objective of this work is to determine if in vivo exposure to acute intermittent hypoxia alters the biology of subsequent in vitro cultures of subventricular zone NPC. Neonatal C57BL/6 mice or rats are

subjected to an acute intermittent hypoxia protocol (20x2 minutes; alternating 21% and 10% O2). Subventricular zone tissue is isolated and NPC cultured and assayed as neurospheres. Growth analysis and immunocytochemistry results have demonstrated that a brief in vivo exposure to intermittent hypoxia increases the capacity for population expansion and increases neuronal differentiation in cultured NPCs. These results suggest that acute intermittent hypoxia treatments may be utilized as a method to "prime" NPC destined for therapeutic protocols such as transplantation into the injured central nervous system.

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Identification of synthetic lethal interactions between cdc13-1and yku80 mutant alleles in S. cerevisiae

Telomeres are the physical ends of eukaryotic chromosomes that function to protect DNA ends from degradation and from end to end fusion. Telomeres consist of stretches of repeated C/G-rich DNA ending with 3 single stranded G-rich overhangs. The maintenance and function of telomeres are facilitated by the enzyme telomerase and by accessory proteins such as Ku and Cdc13p. Cdc13p is an essential, G-strand binding protein that functions in telomere protection and in telomerase recruitment. cdc13-1 is a temperature sensitive allele of CDC13, that is defective for telomere end protection. Ku is a non-essential heterodimer composed of Ku70p and Ku80p. Ku plays multiple roles in DNA metabolism including: non-homologous end joining, recombination and end protection. Ku also interacts with TLC1, the RNA template of the telomerase enzyme and has recently been shown to exhibit end-binding activity. This study examines the effect of mutations in yKU80 on cdc13-1 strains. We will also determine genetic interactions between yku80 mutants and Pif1p, a helicase that inhibits telomerase activity. We previously showed that cdc13-1 strains deleted for PIF1 display hyper-elongated telomeres and increased temperature resistance. Telomere elongation in cdc13-1, pif1Δ strains partially depends on the Ku-TLC1 interaction. Using a genetic library of yku80 mutations generated in A. Bertuch's laboratory, we have introduced the yku80 alleles into the cdc13-1 background. The goals of these experiments are to determine the effects on viability and telomere end protection of the various yku80 mutant alleles in cdc13-1 strains. We hope to identify a cdc13-1, yku80 double mutant that mimics the phenotypes of cdc13-1, pif1Δ strains. To date 9 out over 70 yku80 alleles tested were found to increase the temperature sensitive phenoytype of cdc13-1 strains, suggesting a telomeric/end protection role for these yku80 alleles.
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The Sidney Project: Bringing a New Renaissance to Renaissance Authors

According to The Oxford English Dictionary, a \"renaissance\" is \"[a] revival of, or renewal of interest in, something\". Most know the Renaissance Era in England best for prolific playwrights and poets such as William Shakespeare. However, there are a great many others just as deserving of praise and attention from this period of revival and renewal of the literary arts. Sir Philip Sidney and his family--particularly his sister, Mary Sidney Herbert, Countess of Pembroke, and his niece, Lady Mary Wroth--comprise several of the many severely underrated poets of this time. Today, the Sidney family is nearly unmentioned in English literature classes and literary circles, shunted aside in favor of authors that are more \"popular\". However, using new technology (the Internet and portable technologies such as smart phones) and new media (Tumblr, Twitter, and Facebook, among others), the Sidney family can be given a new renaissance, bringing them into the Twenty-First Century and out of the \"dark ages\" by making these talented poets more accessible to the younger generation. Aspects of this project include the remaking of the International Sidney Society web site and the creation of a smart phone application, a Sir Philip Sidney Twitter account, and an Internet meme. Together, these elements should make this family of authors far more accessible and relatable to a generation that would typically be more inclined to let them fall to the wayside, while likewise providing a set of tools by which scholars of English literature can better access the family and their works.

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Value without God

Theists often make the claim that life is less meaningful or meaningless if God does not exist. I will argue against this claim by establishing the intermediate conclusion: Any “meaning in life” can be found in any conceivable object or for any conceivable reason; and the final conclusion: It is more rational to find meaning in our own existence than in God’s existence. I will begin by distinguishing two types of knowledge: Doubtable Knowledge and Undoubtable Knowledge. I will then proceed to explain that when we attempt to answer the question “What is the meaning of life?” we are attempting to attach value to objects such as ideas, goals, relationships, or anything that can give us a rational belief that our lives are meaningful. Value judgments are subjective opinions and cannot be true or false. However, we can attach value to any object, even some objects that may not actually exist. Therefore it is possible to attach value to a possibly non-existent god. I will further explain that it is intuitively accepted that as rational beings, we prefer to attach value to existent objects instead of non-existent objects. I will then reason to the

final conclusion that it is more rational to find life meaningful through the knowledge of our own existence, than it is to find life meaningful through the knowledge of God's existence.

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Spherical Harmonics in Higher-Dimensional Euclidean Spaces

This paper presents a review of the hyper-spherical harmonics and the related Legendre polynomials that arise in spherically symmetric problems in p dimensions, since it appears the related literature is scant. One of the few books that covers this subject, The Functions of Mathematical Physics by Harry Hochstadt, is now out of print. This paper makes the relevant material covered in Hochstadt\'s book accessible to intermediate undergraduates, as well as providing additional insight and several alternative proofs. The first chapter is brief and acts as an introduction, giving the reader motivation for studying this subject and intuition for working in higher-dimensional spaces. The second chapter provides the necessary background material used to prove the main results that come in the final chapter, in which the hyper-spherical harmonics are introduced as eigenfunctions of the spherical Laplace operator on and the corresponding Legendre polynomials as special cases of these spherical harmonics. Results include the orthogonality of the hyper-spherical harmonics and the completeness of this set of functions over the sphere. Also shown are the p-dimensional analog of the addition theorem as well as analogs of many other properties that the ordinary Legendre polynomials possess in three dimensions as a set of orthogonal polynomials.

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Blogging and Uyghur Culture in the People's Republic of China (PRC)

Scholars from many different fields have looked at blogging as a potential social network medium for communication for politics, conflict and social communication. However, researchers have not looked at blogging in identity formation in minority groups?
I would like to pose questions such as: is blogging utilized as a new medium for communication in minority cultures? Do people in different cultures use these types of new technologies differently than we do? Is new technology, like blogs, and communication media used differently in different cultural contexts? As a case study, I intend to conduct research on blogging and the Uyghur minority group (Ch. Weiwuer zu) in China's Northwestern Uyghur Autonomous Region (Ch. Xinjiang Weiwuer Zizhi Qu). Currently, Han Chinese comprise the majority in Urumqi, and understanding cultural conflict is central to understanding this region, the Uyghur minority group

and especially blogging and its pertinence to culture agents here. As the market for blogging companies is on the upsurge, the popularity of blogs has evidently risen at an astronomical rate. During my research, it will be imperative to compare users in different areas of the country, the Uyghur Autonomous Region itself, among Uyghurs of different ages and socio-economic situations, and to use this to see how blogging is being utilized and why. The Uyghur culture, which has footholds in Central Asian History for thousands of years, is a culture that China is proud to preserve, better understand and further scholarly research in. In terms of this fast growing trend of blogging, it is vital to see whether this new medium is essentially resulting in cultural change, acting as a vehicle for cultural redefinition, or is enacting cultural preservation.

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Ultrasonic Spray Deposition for Scalable Carbon Nanotube Thin Films

Due to their unusual electrical and physical properties, carbon nanotubes are being explored for a number of applications in the growing field of nanotechnology. Devices being explored include new varieties of photovoltaics, transistors, memory elements, and biocompatible electronics. Some of these devices are enabled by bulk networks of electrically conducting carbon nanotubes deposited as thin films. High quality carbon nanotube films have been reported by several groups, but the limited size of these films often proves to be an issue for applicability in devices. In order to produce devices that utilize large or mass produced carbon nanotube films, a scalable means of film fabrication is required. It has recently been demonstrated by the National Renewable Energy Lab that a spray deposition method can produce high quality films that are much larger than those previously attainable. In this method, carbon nanotubes are suspended in solution and sprayed onto a heated substrate. When the solution reaches the substrate, the solvent evaporates and a film of carbon nanotubes is left behind. In this poster presentation, I will describe our present work to reproduce and improve results with an in house built computer controlled ultrasonic spray station. With my faculty mentor and the Physics Department Machine Shop at the University of Florida, I have worked to design, program, and build a spray station for nanotube film deposition. The motivations, design considerations to improve film quality, and completed spray station are to be discussed.

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Parolees' Perceived Deterrence of Graduated Sanctions: Developing a questionnaire for the CDCR Hope Pilot Program

The California Department of Corrections and Rehabilitation (CDCR) HOPE Pilot Program is an attempt to replicate the Honest Opportunity Probation with Enforcement (HOPE) model and extend its findings from probationers to parolees. HOPE requires that drug-involved parolees undergo frequent, random drug tests coupled with swift and certain – but not severe – sanctions. This is in contrast to parole-as-usual (PAU) which utilizes infrequent testing and multiple violations accrued over time before a hearing is held to determine a possible return to prison. As part of the larger study, CDCR parolees were randomly assigned to HOPE (n=50) or PAU (n=50), and findings will determine whether the improved compliance originally observed with probationers is also seen with CDCR parolees. However, it is unknown whether HOPE sanctions are as effective at deterring parolees as they are for probationers. The current project will develop a questionnaire that assesses the degree to which parolees rate the perceived deterrence of graduated sanctions, including those used in HOPE. The questionnaire will be developed by doing a systematic literature review on offenders\' perceptions of sanctions; compiling the sample characteristics, methodology, and results of each article in a table; and critiquing each study for its strengths, limitations, and generalizablilty to the CDCR sample. Based on this analysis, a set of items will be compiled into a questionnaire and the scores will be used as a potential control variable in the outcomes analysis to determine whether perceived deterrence of HOPE sanctions modifies the relationship between supervision type (PAU, HOPE) and parole compliance.

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Corporate Sustainability Reports in Asia and Latin America

The field of CSR (Corporate Social Responsibility) is a relatively new one, and has experienced a surge in interest within the field of academia since the brush with financial cataclysm of 2008. In this thesis I aim to see if interest in CSR has been sustained within developing countries in Asia and Latin America in the face of drastically reduced outside sources of funding after 2008. Demands by stakeholder and shareholder for more socially and environmentally generally increase as material wealth increases per capita, and Foreign Direct Investment (FDI) has a heavy influence on developing economies. As such, corporate interest in developing economies in CSR should wax and wane in accordance with the flow of FDI and the growth of GDP per capita. This will be measured by comparing annual inflows of FDI and annual growth of GDP per capital to annual growth in CSR reporting by individual companies to the GRI (Global Reporting Initiative) database. Results show that interest in CSR reporting is largely resistant to macro-economic trends and has been on the rise in all regions, albeit unequally. Suggestions for further research will be discussed.

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Behavioral Enrichment of Captive Black Bears (Ursus americanus)

A crucial aspect of captive animal care is enrichment. Techniques for enrichment range from simple additions of flora to complicated foraging puzzles. Enrichments are vital in creating an environment for animals that is similar to their wild habitat and sufficiently stimulating to elicit natural behaviors. Enrichment is also used to inhibit unnatural or potentially harmful behaviors, such as pacing. Commonly, enrichment techniques are not scientifically tested. Because of this, the universality of enrichments is rarely scrutinized. This study explores the universality of a "Snak'n' Trim". A snak'n'trim is a hollow ball 10 inches in diameter, made of hard plastic, with a 1 inch opening for food items to be inserted into the ball. Four bears (2 male, 2 female) were observed for ten weeks, five weeks in the summer and five in the winter. Daily observations were made during baseline and enrichment trials. Behavior frequency was calculated and preliminary results indicate a significant ($p<.01$) difference between baseline and enrichment trials, providing evidence for the efficacy of the snak'n'trim for behavioral enrichment.

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Clinical Indicators and the Effects of Treatment for Child and Adolescent Sexual Abuse Survivors

Clinical indicators, as defined by the Australian Health Council on Healthcare Standards, are \"measures of the clinical management and/or outcome of care and they must screen, flag, or draw attention to a specific clinical issue\". In the psychology field, clinical indicators may include depression, anxiety, defiant behavior, and abnormal cognitive schemas. Professionals working with child sexual abuse survivors face challenges in identifying clincal indicators and translating clinical indicators into the development and implementation of effective treatment plans. Current research suggests child sexual abuse survivors who develop negative cognitive schemas are more likely to develop dissociation, poor self-esteem, adolescent deliquency, and be admitted to a psychiatric institution (Feiring, Cleland, & Simon 2010; Raviv, Taussing, Culhane, & Garrido 2010; Woodruff & Lee 2011). The Trauma and Attachement Belief Scale (TABS) and Trauma Symptom Checklist for Children (TSCC) are two commonly utilized assessments given to children to gauge the severity of the effects of their abuse. I will examine the influence of cognitive schemas, as measured by the TABS, on treatment success, as measured by the TSCC, in child and adolescent victims of sexual trauma that complete treatment and present findings along with clinical implications.

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Molecular Docking for Development of Selective Retinoid X Receptor Agonists

The retinoid X receptor (RXR) is a nuclear receptor important for cancer and Alzheimer\'s disease. We used molecular docking to develop new RXR agonists. A large library of lead compounds was constructed, many of which were based on bexarotene, an FDA approved drug. Our docking studies showed that the addition of electron-withdrawing groups ortho to the carboxylic acid on the phenyl ring of bexarotene led to an increase in binding affinity. Cyclopropane bridgeheads were also found to produce more favorable interactions. Based on our computational results, several new analogs were synthesized and tested. Out of these, four analogs were discovered to promote RXR-mediated transcription with comparable EC50 values as bexarotene.

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Analysis of Ionized Water for Silver Nanoparticles

The alkaline water ionizer claims to have nano silver powder to aid in the antimicrobial ability of the filter. This study is to determine if these nanosilver particles are escaping the filter and seeping into the water during the filtration process. Silver nanoparticles are increasingly used in products from lotions to socks with very little known of its effect on the human body. Silver has long been used for medicinal purposes, but never in such small particle size. Currently most of the applications of silver nanoparticles are in antibacterial/antifungal agents in biotechnology and bioengineering, textile engineering, water treatment, and silver-based consumer products. The findings of this project are important for knowledge of readily available and novel items sold online that could potentially be harmful to human health. Water samples collected from Hogtown Creek in Gainesville, FL, and ddH2O taken from the lab were then treated with the water ionizer. Samples from each treatment were taken to the University of Florida and analyzed by Inductively Coupled Plasmon Mass Spectroscopy (ICP-MS). Silver and nanosilver particles were below the detectable limit in all ddH20 water samples and Hogtown Creek samples analyzed by the ICP-MS showing no outflow of the particles from the ionizer to the water.

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A puzzle in TGF-mediated cdk activity in human myeloid leukemia cells

We have previously reported that Transforming Growth Factor-beta (TGF-) significantly inhibited growth of several human myeloid leukemia cell lines including TF-1 and MV4-11 cells. Cell cycle analysis indicated that these cells were arrested in G1 phase by TGF-. We also found that several cell cycle regulated protein kinases (CDKs), such as CDK4 and CDK2, were significantly downregulated. In contrast, p27, one member of cdk inhibitors, was clearly upregulated. It is well documented that the inhibition of CDKs is a result of the binding of the cdk inhibitors in response to TGF-. The CDK inhibitors have two families: CIP/KIP and INK. The CIP/KIP members consist of p21, p27 and p57. The Kip/Cip inhibitors can bind to and inhibit both cyclin D-cdk4/6 and cyclin-E/A-cdk2 kinases. The INK members consist of p15, p16, p18 and p19. The Ink inhibitors only bind to and inhibit cdk4 and cdk6. In this study, we detected an enhanced level of p27 in TGF- treated cells; however, we were not able to detect the expressions of p15, p16, p19, and p57. Although the cells barely expressed p21, the treatment of cells with TGF- had no effect on the expression of the molecules. Since p27 has been reported to have both positive and negative roles on cdk activities, our data suggest that the cdk inhibitors we tested may not play an important role in TGF--mediated growth and cdk inhibition in these human myeloid leukemia cells. The mechanism for the CDK inhibition in the presence of TGF- is still a puzzle. Some other molecules that may negatively regulate CDK activities in the cells tested remain to be identified (This work is supported by NIH-NIGMS MBRS RISE: R25 GM059244, Barry University).

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Characterization of the expression pattern, processing, and subcellular localization of native PfPM9 during the asexual erythrocytic developmental cycle of Plasmodium falciparum.

Malaria is an increasingly resistant infectious disease caused by apicomplexan protozoan parasites from the genus Plasmodium falciparum. It remains to be a public health issue plaguing various parts of the world, especially in underdeveloped areas in Southeast Asia and sub-Saharan Africa. Due to the lack of vaccines and a growing resistance to anti-malarials, development of novel anti-malarial drugs are of utmost importance. Rational drug development requires understanding of the biochemical pathways in the parasite's replication cycle. The focus is on plasmepsins (Plasmodium pepsins): aspartic proteases that perform vital functions and allow the parasite to thrive. Among the ten plasmepsins, we hypothesize that PfPM9 is essential for the

parasite's survival during the asexual erythrocytic stage and is a target for the anti-malarial activity of HIV protease inhibitors (HIV PIs). These aspartic protease inhibitors prevent the normal processing of critical polypeptide substrates, killing the asexual stage of the malaria parasite (in vitro). Identifying the timing of expression and sub-cellular location of PfPM9 will help define its role and determine its potential substrates. The results will help determine if PfPM9 is a potential target for HIV PIs. Critical background information needed to test this hypothesis will be obtained by accomplishing the following specific aims:
1) Prepare, characterize, and purify monospecific polyclonal antibodies against PfPM9 from rabbit hyperimmune serum.
2) Optimize western blot to detect native PfPM9 from all proteins expressed by asexual blood-stage parasites.
3) Utilize antibody preparations to localize PfPM9 in parasitized erythrocytes using immunofluorescence assay techniques.
4) Synchronize the asexual division cycle to obtain parasites (8 hr intervals) throughout the 48-hr cycle and utilize western blot methods to detect/compare the steady-state level of PfPM9.

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The semiclassical limit of the one-dimensional focusing nonlinear Schrodinger equation (NLS) for compactly supported initial data.

The semiclassical limit of the one-dimensional focusing nonlinear Schrodinger equation (NLS) with compactly supported initial data is studied. The five parameters used in describing the solution to the NLS are related by moment conditions, which give a system of equations when solved. One parameter affects the profile of the initial data and has been fixed. The two parameters that describe the form of the solution are dependent on the parameters of time and space. Since we are dealing with the focusing NLS, the solution becomes taller and thinner in time until the point of gradient catastrophe. Algebraic methods of studying the dynamics of this system are developed and the region of gradient catastrophe is explored using these methods and through numerical techniques. The point of gradient catastrophe can be understood as the moment in which bosenova occurs in Bose Einstein condensation, as well as the appearance of rogue waves in the ocean.

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Transcriptional regulation of Dual specificity phosphatase 4 (Dusp4) by Muscle-specific RING finger protein 1 (MuRF1)

Eukaryotic gene regulation requires a dynamic control mechanism with the ability to activate and suppress gene expression in response to intracellular and extracellular signals. Dual specificity phosphatase 4 (Dusp4) is part of a family of mitogen-activated protein kinase phosphatases (MKP) that have the ability to dephosphorylate and inactivate mitogen-activated protein kinases (MAPK). Furthermore, the Dusp family of proteins is able to dephosphorylate both serine/threonine and tyrosine kinases, which could impact a number of important signal transduction cascades. Skeletal muscle atrophy is caused by a range of physiological conditions, including immobilization, spinal cord damage, inflammation, and aging. The muscle-specific RING finger 1 (MuRF1) protein is classified as an E3 ubiquitin ligase that is induced under nearly all atrophy conditions and is believed to promote protein degradation. Interestingly, the data described in this study provides evidence that MuRF1 may also regulate the transcriptional activity of a number of genes that show differential expression in nerve damage-induced atrophy (i.e. denervation). A preliminary investigation using microarray technology to analyze changes in gene expression in the skeletal muscle of wild-type and MuRF1-null mice following denervation, revealed a number of genes that show altered expression profiles following nerve damage-induced atrophy in the absence of MuRF1, including Dusp4. In order to further characterize the transcriptional regulation of Dusp4, a 500 base pair promoter fragment was cloned into a reporter plasmid, and this construct was then transfected into C2C12 cells in combination with a MuRF1 expression plasmid and analyzed over several days. In cells with ectopic expression of MuRF1, there was a significant increase in the activity of the Dusp4 reporter plasmid. Research into the possibility that MuRF1 may function as a muscle specific transcription factor is currently underway, but the preliminary findings described in this study offer exciting evidence for a new function of the MuRF1 gene.

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Antibacterial and antidiabetic natural products from Florida marine bacteria

New antibacterial and antidiabetes drug sources are needed to keep up with the alarming increase in infections and incidence. Historically, the majority of clinically useful drugs have been obtained from terrestrial natural sources such as plants and microbes. Today such terrestrial sources of drugs are diminishing. Fortunately marine microbes are an emerging and undeveloped source of bacterial treatments that shows promising pharmaceutical potential. Marine microbes produce biologically active secondary metabolites as sources for novel natural drug products and may inhibit bacterial growth and biofilm formation, a subsequent aggregation of bacteria formation. Additionally, marine microbes may present a potential source for antidiabetes drugs as only a few insulin degrading enzyme (IDE) inhibitors are known. Because natural products include a diverse range of molecules, they offer great potential for the discovery of new IDE inhibitors. Through repetitive plating, approximately 50 pure bacterial colonies obtained from marine sediment samples from northeast Florida and the Florida Keys were isolated and chemically extracted. These extracts were subjected to bacterial and insulin degrading enzyme assays. Through bioactivity-guided fractionation of chemical extracts, the

natural products with the strongest antibacterial and anti-insulin degrading enzyme activity (lowest IC50 value) will be isolated using chromatography and identified using analytical techniques and sequence analysis. Preliminary results indicate minimal bacterial, biofilm formation, and IDE inhibiting activity, but allude to marine microbe diversity found in northeast Florida and the Florida Keys.

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Spatial and Temporal Variation in Epiphytic Macroalgal Community on Mangrove Pneumatophores in Tampa Bay.

Epiphytic red algae of mangrove forests play an important role in tropical and subtropical estuarine communities. Mangroves prop roots and pneumatophores provide hard substrates that host many types of macroalgae. These macroalgal communities contribute significant fixed carbon to these systems as primary producers. Spatial and temporal trends in primary production, biomass, community composition and stress tolerance have only received limited attention despite the prevalence of this community type on the hard substrate provided by mangrove roots. The importance of this substrate to macroalgae is underscored by the relative absence of other hard, attachment substrates (that most macroalgae require) in this largely soft bottom community. This preliminary study begins to examine the variation in overall ecophysiology, community composition, and biomass of mangrove pneumatophore epiphytes in Tampa Bay over three scales: 1) seasonal, 2) macrospatial, and 3) microspatial. Macrospatial sampling examines the horizontal variation in macroalgal communities in a shallow lagoon fed by a tidal creek. Microspatial sampling examines the vertical variation in this same community in 2 cm intervals over the height of pneumatophores. A synthesis of fall (November 2011) and winter (January 2012) samplings will be presented in order to begin to discern significant trends related to these three scales. These findings will also be discussed in the context of future research on primary production and stress tolerance in this macroalgal community.

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Making a Good Impression or Being True to Ourselves: Which is More Important?

According to Snyder (1987), there are two kinds of people in the world: high self-monitors and low self-monitors. High self-monitors are motivated to be the right person at the right place at the right time, whereas low self-monitors are motivated to be themselves across situations. However, we can't always act in ways that fulfill our motivations, and consequently we experience negative emotions (Baumeister, 1998). For high self-monitors, inability to make a

positive impression may cause negative feelings. For low self-monitors, inability to behave consistently with their personal values and beliefs may cause negative feelings. Using a well-established technique in the literature on ostracism (Williams, 2007), we will ask participants to recall and write about a time when they were unable to make a positive impression or were unable to behave consistently with their values. Participants then fill out a modified anxiety scale (Watson & Friend, 1969) and two self-monitoring scales (Lennox & Wolfe, 1984; Snyder, 1974). We expect low self-monitors will have more anxiety than will high self-monitors when writing about a time they behaved inconsistently with their values and beliefs. We also predict that high self-monitors will have more anxiety than will low self-monitors when writing about a time they were unable to make a positive impression. Our findings will dovetail with other results in which high and low self-monitors were found to get depressed for different reasons and to use different remedies for their depression (Rahaim, Waid, Kennelly, & Strickland, 1980; Snyder & Smith, 1986). Our study will potentially add to the theoretical interface between personality, social, and clinical psychology. Our findings may also have practical value by providing insight into causes of interpersonal stress and its remedies.

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Does It Hurt More to be Ostracized Because You're Not Cool or Because You're Not Similar? It Depends

High self-monitors are motivated to have status in relationships. Low self-monitors are motivated to have equality in relationships. We are going to examine how high and low self-monitors react to different forms of ostracism (i.e., being excluded and/or ignored). We will have individuals recall and write about a time a group/individual excluded them because they lacked social status (i.e., not \"cool enough\") or because they were personally incompatible (i.e., lacking shared values). We hypothesize that compared to low self-monitors, high self-monitors who recall and write about a time of exclusion by a group/individual because they lacked social status will experience more distress (i.e., negative affect and unfulfilled basic needs). We also predict that compared to high self-monitors, low self-monitors who recall and write about a time of exclusion by a group/individual because they were personally incompatible, will experience more distress (i.e., negative affect and unfulfilled basic needs). After completing narratives, participants will complete self-report questionnaires to measure basic needs and negative affect. Then, participants will complete the Self-Monitoring Scale (Snyder, 1974) and the Revised Self-Monitoring Scale (Lennox & Wolfe, 1984). This study will give us a better understanding of how high and low self-monitors react emotionally, cognitively, and behaviorally to being ostracized. Understanding emotional reactions in different types of people in turn leads to a better understanding of the motivations behind their behaviors. This research might be helpful in devising ways of coping with negative emotions. It might also be helpful in finding ways to change or improve anti-social behaviors that can result as reactions to emotions evoked after experiencing forms of ostracism.

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College Student Attitudes About Cheating and Plagiarism

UCF received national media attention when a shocking 200 students were found to have cheated on an exam (knightnews.com, 2010). Cheating is not unique to UCF. Up to 40% - 60% of undergraduates report cheating in college (Davis, 1992; 1995); 42% are willing to cheat in the future on electronic exams given the opportunity (Chapman, Davis, Toy, & Wright, 2004). Cheating may be more prevalent in web-based courses, referred to as the 'next generation cheating challenge' (Milleron & Sandhoe, 2008, 15). In this study, over 200 participants will be randomly assigned to review a scenario in which modality of the course (online or face-to-face) and type of dishonesty (cheating on a test or plagiarizing a paper) is manipulated. Participants will be assigned to one of four scenarios: 1) cheating on a test in face-to-face class, 2) cheating on a test in an online class; 3) plagiarizing on a paper in a face-to-face class, or 4) plagiarizing on a paper in an online class. Students will rate the severity of the act, appropriate consequences, and a number of social dimensions. It is hypothesized that students will perceive cheating on a test in a face- to-face class as the most dishonest and endorse harsher consequences and more ostracism. It is hypothesized that cheating and plagiarism will be perceived as less dishonest and worthy of lesser consequences when done in online classes. Implications in relation to development of modality-specific strategies related to academic dishonesty will be discussed.

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Potential presence of antibiotic resistant organisms in Tampa Bay molluscs.

The overuse of antibiotics in humans and livestock has led to a pandemic of antibiotic resistant bacteria. There are now known resistant organisms to every commonly used antibiotic and with there being very few, if any, new drugs developed in recent years, the spread of antibiotic resistant organisms has become a situation of major concern. Studies published in the last few years have shown the presence of human antibiotic resistant bacteria in a variety of wildlife including seagulls in Portugal and the South of France, and closer to home, bottlenose dolphins in South Carolina and Florida, and sharks from several areas, including the Florida Keys. As our school is based just north of Tampa, we decided to check Tampa Bay waters for the presence of antibiotic resistant organisms. We collected samples of the Florida Oyster Crassostrea virginica and took swab samples, from which we then cultured and isolated individual bacterial colonies. With the use of Mueller-Hinton agar plates and commercially available antibiotic discs we then examined for the potential presence of resistant microbes. Upon isolation of prospective resistant bacteria, we then attempted to determine the bacterial species. Here, we will present our results to date and the potential for future studies in the Tampa Bay marine environment.

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Who People Say I Ought to Be vs. Who I Think I Should Be: Self-Monitoring and Self-Discrepancies

We examined the relationship between self-monitoring, self-discrepancies, and distress. High self-monitors are motivated to be socially appropriate, whereas low self-monitors are motivated to be self-congruent. When asked to think about themselves, high self-monitors and low self-monitors could compare their actual selves to either their ideal selves (i.e., who they want to become) or their ought selves (i.e., who significant others want them to become). Given a choice, high self-monitors should avoid actual-ought comparisons to evade the negative feelings that accompany self-discrepancies, whereas low self-monitors should avoid actual-ideal comparisons to evade the negative feelings that accompany self-discrepancies. Data collection is ongoing. To assess self-discrepancies, participants are choosing one of two versions of the Selves Questionnaire (Higgins, 1986): actual self vs. ideal self or actual self vs. ought self. To assess their distress, we are asking participants to complete the Hopkins Symptom Checklist (Mattsson,Williams, Rickels, Lipman, & Uhlenhuth, 1969). Last, participants are completing the 25-item Self-Monitoring Scale (Snyder, 1974) and the 13-item Revised Self-Monitoring Scale (Lennox & Wolfe, 1984). We expect that given a choice, high self-monitors will choose the actual-ideal self-reflection task while low self-monitors will choose the actual-ought self-reflection task. We further predict that high self-monitors will experience more distress when they choose the actual-ought self-reflection task than the actual-ideal self-reflection task whereas low self-monitors will experience more distress when they choose the actual-ideal self-reflection task than the actual-ought self-reflection task. In future studies, we plan on adding psychophysiological measures of stress (e.g., heart rate). Our findings may help further our understanding of stable differences in self-monitoring and the way in which self-discrepancies affect our well-being. Our findings may also help mental health professionals better understand the nature of their clients' problems and devise more effective therapies.

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Does Facebook Make You Smarter?

With social media use increasing in young people, there are growing concerns of negative side-effects to learning and social relationships. There are a few studies examining the impact of social media use, such as Facebook, on grades. However, these studies typically rely on self-reports of GPA to measure students' attainment. In order to provide a more reliable measure of

cognitive skills, the present study used standardized tests of IQ, Working Memory, and academic attainment; as well as levels of social connectedness. We recruited 104 students aged between 15-18 years and asked them various questions about the length and type of social media use (Facebook, YouTube, and Twitter). The findings indicated that young people who had used Facebook for more than a year had higher scores in tests of IQ, Working Memory, and spelling, compared to their peers who had used it for 4 months. A regression analysis also confirmed that certain types of Facebook activities (such as posting status, checking another's status, chatting, etc.) were a significant predictor of verbal IQ scores. However, YouTube use did not appear to significant impact any of the cognitive abilities. This pattern of results is discussed in light of growing application of social media in educational contexts.

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Is a Picture Worth 1,000 Words?

Kenrick and Gutierres (1980) approached college-aged men while they were or were not watching the television show Charlie's Angels. The researchers found that the men rated a photograph of a woman as less attractive when they had been watching the show. The purpose of the current study was to determine if there are similar effects when participants view very attractive computer-generated images, or avatars. Because of the increase in exposure to avatars, we attempted to explore if being exposed to attractive computer-generated images affected how individuals perceive actual human beings. Fifty female avatars and fifty male avatars were created for a norming study. Forty three participants rated the attractiveness of these avatars on a scale of -3 (extremely attractive) to +3 (extremely unattractive). The three female avatars with the highest and lowest attractiveness ratings were selected for use in the current study. In addition, a collection of 22 photographs of women were rated on the same scale by 71 participants. The female photograph with the rating closest to "neutral" was selected for use in the current study. The participants viewed the three avatars that were previously rated as high in attractiveness or as low in attractiveness. Each avatar was rated on the following characteristics: likable, reasonable, courteous, selfish, friendly, sincere, responsible, attractive, kind, agreeable, outgoing. The participants then viewed the photograph of an average-looking woman. The photograph was also rated on the same characteristics as the avatars. The results indicated that there was a significant effect of avatar attractiveness on the attractiveness ratings of the photograph. Those participants who viewed the attractive avatars rated the photograph as being less attractive than did the participants who viewed the unattractive avatars. Thus, exposure to attractive female avatars led participants to rate a woman as being less attractive.

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Design and Synthesis of a Chelation-Inducible Beta-Turn Mimic

Although beta-sheets are firmly established as secondary elements of protein structure, the factors that stabilize the cross-strand interactions are not well understood. The beta-sheet motif is crucial to protein structure, function, and even some disease states. Beta-hairpins are the smallest beta-type structural elements in peptides and proteins . Beta-hairpins consist of two anti-parallel strands that are linked by a turn or small loop. Within proteins, beta-hairpins are often involved in protein-protein and protein-DNA interactions. Much of the stability of beta-sheets is derived from distal interactions within the tertiary structure of the protein; therefore it is difficult to deconvolute the contributions of individual residues. Beta-hairpin models can be used to mitigate these complications and thus allow the motif to be studied outside of its tertiary context. A photo-inducible beta-turn mimetic has already been reported by the groups of Hilvert and Renner using a photochromic azobenzene linker that undergoes a conformational change when exposed to UV light of the appropriate wavelength. The purpose of this project is to design and synthesize a new beta-turn mimic that will allow for the systematic study of cross-strand interactions in beta-hairpins. A polyethylamine can be used to mimic the 'loop' region of a beta-hairpin and a conformational change will occur upon chelation of a metal ion by the polyamine core. This conformational change will bring the two terminal peptide strands in to close proximity, thus mimicking the anti-parallel strands of a beta hairpin.

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Genetic Analysis of Captive and Released Perdido Key Beach Mice

Perdido Key, located in the western-most Florida Panhandle and southeastern region of Alabama, is the location of Perdido Key Beach Mouse (PKBM). This subspecies is adapted to the sand dune habitat on Perdido Key that is under threat from coastal development and tropical storm erosion, and by predation by feral cats. This species is federally listed as endangered, and with such few mice in a population, genetic diversity becomes an important consideration for reproductive success and survival. A recovery plan involving captive breeding and release was created to re-establish PKBM at .Gulf State Park. To examine the relative diversity of captive, released and subsequently established wild populations, I analyzed the genetic diversity using a large suite of microsatellite loci. DNA was extracted from tissue samples from both captive mice (n=16) from the Santa Fe, Brevard, and Palm Beach Zoos, and released mice samples (n=48) from the U.S. Fish and Wildlife Service. These samples were then genotyped using 51 microsatellite markers, 26 of which were variable in captive PKBM. As predicted, genetic diversity is highly reduced in captive mice, due to the small number of founders. Genetic

variation in wild mice captured at Gulf Islands National Seashore Perdido Key State Park is considerably higher. While numbers of mice at Gulf State Park are now high, it remains to be seen whether genetic variation has increased.

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Protest Voting in Post-Soviet Elections: An Examination of the \'Against All\' Vote in the 2010 Kyrgyz Parliamentary Elections

This study examines the ‘against all’ vote in the 2010 Kyrgyz Parliamentary elections as an example of protest voting in post-Soviet elections. The option to vote \'against all\' can be used not only as a \'barometer\' of society\'s well being, but can also be reflective of a regime\'s willingness to tolerate dissent. Though the post-Soviet Russian Federation was once an exemplary case study of an electoral system with the \'against all\' option, it has recently lost its status as a democracy that respects civil liberties such as fair elections and actually banned this electoral option several years ago. However, other countries, such as the Kyrgyz Republic, have committed themselves to democratic elections by taking up the \'against all\' vote as a barometer. This analysis proceeds by first investigating whether there are common characteristics found amongst people who vote ‘against all’. In order to do this, common characteristics found amongst Russians who voted ‘against all’ in Russian elections until 2005 are tested in the context of this Kyrgyz Election. Specifically, I test the relationship between votes ‘against all’ and urbanity, education, ethnicity, and exposure to violence. The analysis then proceeds to investigate whether votes ‘against all’ in this election were highly dispersed or if they were concentrated in small pockets of the country, and what reasons could account for this distribution of votes.

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“Your halfalogue is making me feel out of the loop”: Overhearing partial conversations leads to feeling excluded and ignored.

Past research indicates that overhearing a cell phone conversation can be both intrusive and cognitively demanding (Monk, Carrol, Parker & Blythe 2004; Monk, Fellas & Ley 2004; Emberson, Lupyan, Goldstein & Spivey 2010). Feeling out-of-the-loop might explain this distress, as the phone call, or halfalogue, presents only one of the speaker’s contribution to the conversation. Out-of-the-loop is considered a form of ostracism (being excluded and ignored), which leads to feelings of social pain, thwarted basic social needs satisfaction, worsened mood, and increased aggression (Jones & Kelly, 2010). Previous work on ostracism demonstrates that

that ostracism can impair cognitive abilities, and this might explain Emberson's research (Williams, 2007). We hypothesized that overhearing a halfalogue will lead to feeling out-of-the-loop, as a form of ostracism, compared to hearing a dialogue or a monologue. In order to test our hypothesis, we performed a one-way ANOVA (with post-hoc comparison) using the overheard stimulus as the independent variable. Our hypothesis was partly supported, as halfalogues did increase out-of-the-loop feelings compared to dialogues. Counter to this hypothesis, however, we did not find a significant impact of feeling out-of-the-loop on ostracism or its consequences. The results of this study reveal the possibility that feeling out-of-the-loop is not always coextensive with ostracism. Future research should explore whether manipulating the participant's perceived social relevance to the out-of the-loop condition is necessary to significantly influence feelings of ostracism.

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Advertising, Media Literacy, and Sustainability

It is evident that the countless advertisements and media exposed to society can have a significant effect on one's actions. Several companies work to promote themselves and their products as being environmentally friendly and sustainable. Too often, however, yet they do not explain the environmental impact for producing their products. So how do people find out if a company, through its advertising campaigns, follow sustainable business practices? In order to utilize the media and advertising to effectively communicate a company's sustainable business practices, it must include the following three practices: utilize alternative energy sources to reduce their carbon footprint; purchase and produce goods and services using organic raw materials; and promote environmentally friendly production processes and promote them effectively using media and advertising. For media literacy to communicate sustainability it all depends on the people around the world who are making alternate choices and supporting them as well. In media literacy the main goal is to find ways encourage people to be involved in critical awareness and creative media skills with the understanding that media is a necessity to achieve sustainability. Our poster will highlight specific companies and their advertising campaigns to promote environmental awareness and their sustainable business practices. It will compare and contrast relatively effective and ineffective advertising campaigns as a means of demonstrating this.

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The Inclusivity and Exclusivity of Laughter

Research on laughter has been largely limited to the positive effects that it causes, such as its ability to decrease stress (Rod & Herbert, 1983) and increase pain thresholds (Nevo, Keinan, & Teshimovsky, 1993). Research has neglected the potential negative effects of laughter, which may come from its ability to exclude others. The negative effects of laughter may be similar to the negative effects caused by ostracism (being excluded and ignored) such as social pain (pain associated with damaged social relationships). If this is the case, an empirical approach to the excluding potential of laughter is critical to the body of research pertaining to forming and maintaining social bonds. We attempt to find out when people think laughter is inclusive and exclusive by having participants recall one of five events. They will recall a time when: laughter made them feel included, laughter made them feel excluded, they heard a joke, they laughed alone, and a typical Wednesday afternoon. Previous research demonstrates recall tasks have successfully caused individuals to re-experience the feelings associated with the recalled episode (Chen, Williams, Fitness, & Newton, 2008). Participants will then report their need satisfaction (i.e., belonging, control, self-esteem, meaningful existence), social pain, mood, aggressive behavior temptations, and meaninglessness of life. I expect to see that the inclusion laughter condition will result in the highest ratings of basic need satisfaction, positive feelings, meaningfulness of life, and the lowest temptation to agress. I expect to see just the opposite in the ostracism condition, participants will feel the worst in this condition compared to the others. The joke and laughter alone conditions may produce a more positive response than the typical Wednesday condition if laughter itself is sufficient to induce positivity.

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Rational Drug Design of Carbonic Anhydrase IX inhibitors.

Carbonic anhydrases (CA) are a family of metalloenzymes (EC 4.2.1.1) found in all organisms, catalyzing the reversible reaction of CO2 hydration to bicarbonate and a proton. CA isoform IX and XII (CA IX and CA XII) are two of the isoforms of human CA that have been known to play a critical role in cancer proliferation. CA IX overexpression in most cancers has led to the use of CA IX as a biomarker for cancer diagnosis and prognosis. The differences in the active sites of different isoforms of CA are subtle and this causes non-specific CA inhibition which leads to various side effects. In case of CA IX inhibition, CA II along with other isoforms of CA, act as an off-target which is undesirable for cancer treatment. This study largely focuses on CA IX inhibition. Experimental and docking studies on rational drug design of isoform-specific inhibition of CA are performed, and presented here are CA II crystal structures in complex with different inhibitors that belong to different structural classes. The structures of these complexes were refined in a resolution range of 1.2-1.7 &#65533;.

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A Genome-Wide Association Study Identifies Locus for Eye Color Variation in Puerto Rican Paso Fino Horses

The Puerto Rican Paso Fino is a gaited horse breed that segregates for iris color. The irises of Puerto Rican Paso Finos can vary from a dark brown color to a dynamic color breeders call 'tiger' or 'goat' eye. 'Tiger' eye is characterized by shades of orange, yellow, and amber. Pedigree analysis implicated a recessive mode of inheritance for this phenotype. To map this trait and identify candidate genes for further investigation, a genome wide association study (GWAS) was conducted using an Illumina Equine SNP72 BeadChip and 24 unrelated DNA samples. To determine significant allelic associations, we used gPLINK (version 2.050) and applied an adaptive permutation approach to correct for multiple testing in this small sample set. The highest association detected was on horse chromosome one (P=9.0x10-6). The association of single nucleotide polymorphisms in two functional candidate genes from this region was confirmed in a larger sample set of 47 horses by restriction fragment length polymorphism analysis (P= 3.91x10-7 and P=2.14x10-8 respectively). These two genes will be investigated further for a causative mutation by DNA sequencing analysis.

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An analysis of the vegetation within the FAU Preserve as a basis for management of scrub habitat for Gopherus polyphemus

In Florida, urbanization has caused a major decline in the av¬¬ailable habitat for its native species. In addition, fragmentation has led to habitat degradation due to unchecked succession resulting from a lack of natural fires. Of particular concern are the native Florida scrublands. We assessed habitat suitability and resource selection by the gopher tortoise within a Southeastern Florida scrub habitat. Belt transects were used to assess vegetation. We compared our data to recently collected gopher tortoise burrow location data in an attempt to detect patterns of resource selection. We found that the tortoises are selecting for areas with minimal shrub and canopy cover and greater herbaceous cover. Vegetation cover throughout the entire preserve was found to be in agreement with literature values of less than 50% total cover for suitable scrub habitat. However, 23% of the preserve was covered by invasive vines. Our data suggests that the habitat is superficially healthy. Nevertheless, the significant coverage by invasive vines and exotic plants illustrates the habitat's potentially rapid degradation if there is no human intervention in the near future.

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Microwave Synthesis of Nanocrystals

Nanotechnology has gained much interest in the past decade for its transcendence into a wide variety of fields, including lighting, biomedical applications, and chemical sensing. Microwave chemistry provides a novel technique far superior to conventional synthetic methods, with the unprecedented ability for reliable samples batch-to-batch, narrow size distribution, high quantum yields and cost effective synthesis. This project will utilize microwave chemistry to synthesize nanoparticles and will focus on methodizing synthesis. By applying conformational analysis we will be able to understand and determine the factors needed for optimal nanoparticle development. Highly polarized precursors will be used to form nanoparticles such as CdSe and CdTe semiconductors by implementing novel microwave chemistry. These can then be further modified with a ZnS crystalline shell to enact a decrease in toxicity and make available functional surface chemistry ligands, which are important for most downstream applications. The modified and unmodified nanocrystals will be characterized with UV-Vis absorption and emission spectra, powder x-ray diffraction, x-ray fluorescence spectroscopy, and transmission electron microscopy. This will provide a measure of quantum yield, structural determination, elemental composition, as well as imaging and size determination and distribution. These conformational methods will provide the knowledge necessary to further advance the use of nanoparticles, and a deeper understanding of the synthetic methodology needed to produce high quality materials.

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Insights: Sonifying Search Data

This project involves the sonification of Google search data. Sonification is a process by which a composer/researcher/artist uses sound to convey or perceptualize data; common examples are a Geiger counter and heart rate monitor. The goal of the project is not only to provide the necessary computing and code to sonifiy the data, but also to construct a process that allows the user to be expressive with the data given, similar to how one would play a traditional instrument. To achieve this aim, a custom process is used involving several different computer programs each working to achieve a specific task. These include Cycling 74's Max/MSP (a graphical programming environment used by both computer musicians and visual and interactive artists), Applescript (used to automate tasks in Apple OS X), Safari (a web browser), and Ableton's Live (a DAW- digital audio workstation). Access to the necessary data is provides through a Google service named 'Insights for Search' in which they normalize the volume of a particular search

term throughout a user-defined period of time. AppleScript and Safari are used to download the data on a particular search term from Google's server. Max/MSP then takes that data and extracts the volume of each search per week. This extracted data is then used to define parameters for MIDI (Musical Instrument Digital Interface), a standard for producing digital sound; in this application it bridges the 'gap' between Max/MSP and Live. This MIDI data produces sound in Live through software instruments such as synthesizers and reproductions of real instruments like piano and guitar. This method allows the listener to follow global trends in search terms over time; and when multiple words are entered, understand the relationships between terms in a unique way.

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Castra et Urbes Lapideas: Functions and Legacies of Stone Castles of the Teutonic Order.

Founded in 1190 at the siege of Acre, the order of the Teutonic knights became one of the three major military-monastic orders to emerge from the crusading period in Western Europe. While the order has been the subject of much scholarly work, the castles the Knights built to respond both to defensive military needs and their monastic vocation have not received sufficient attention. My paper focuses on the castles the Teutonic Knights built in the Holy Land, Transylvania, and Prussia from the 13th to 14th century. My goal is not simply to look at the progression of military architecture from the beginnings of the order at the time of the Third Crusade (1188-1192) to the conquest of the Prussian lands and the establishment of the Teutonic state in Northeastern Europe. Instead, I will argue that much more than defensive structures, the castles built by the Order were places of pilgrimage and worship, administration and justice, symbols of permanent domination, and in some cases rebellion and independence. Using both written (primarily the chronicle of Nikolaus of Jeroschin) and archaeological sources from Israel, Romania, and Poland, my paper will attempt to approach the castles of the Teutonic Order from a novel perspective and to illuminate so far neglected aspects of the medieval architecture and culture.

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Geometric Structures on Lie algebras Associated with Simple Graphs

A well known construction associates Lie algebras to simple graphs. We studied the geometric aspects of such Lie algebras, viz. properties of their Lie groups. We proved that even dimensional Lie algebras associated with graphs of small degree admit integrable complex structures. We further proved that the members of two infinite families of such Lie Algebras

associated with trees also admit integrable complex structures and ultimately demonstrated that the corresponding Lie groups have invariant complex structures.

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Roe v. Wade: Increasing Individuals' Rights or Enhancing Federal Powers?

The 1973 Supreme Court case Roe v. Wade is viewed as the decisive turning point of the pro-life/pro-abortion debate. However, this decision was not about a 'right to abortion' but instead about a hotly debated 'right to privacy' which was determined by the Supreme Court's interpretation of Constitutional Amendments 4 (illegal search and seizure) and 9 (protecting peoples' rights from governmental powers enumerated in the Constitution). Several court cases - involving right to privacy arguments - set precedents for the Roe v. Wade decision. The 1965 Griswold v. Connecticut case overturned an 1879 Connecticut statute making it unlawful to "use any drug, article, or instrument to prevent conception." The 1972 Supreme Court case Eisenstadt v. Baird overturned a Massachusetts statute prohibiting the distribution of contraceptives to unmarried persons. Neither case explicitly referred to abortion but instead established a right to privacy. Roe v. Wade in turn set precedence for establishing a de facto right to an abortion. In the 1973 Doe v. Bolton case, the court struck down Georgia statutes that (a) prohibited abortions on grounds other than protection of mothers' health, serious child defects, or rape and (b) required approval of hospital committees. The court decided these procedural conditions violated the Fourteenth Amendment. In Bellotti v. Baird, the court ruled that for minors seeking abortions, states must provide minors with alternate consent from local courts when one or both parents would not consent. Note that arguments shifted away from a 'right to privacy' to a 'right to abortion.' By establishing its power during the appeals process, the Supreme Court ushered in a new age of federalism in which it was the arbiter of anything regarding a 'right to abortion.' Although states' courts previously had authority concerning abortion regulations, the federal courts affixed superior powers to which states must now yield.

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Approximation by Bernstein Polynomials at the Point of Discontinuity

Chlodovsky showed that if x_0 is a point of discontinuity of the first kind of the function f, then the Bernstein polynomials B_n (f,x_0) converge to the average of the one-sided limits on the right and on the left of the function f at the point x_0. In 2009, Telyakovskii extended the asymptotic formulas for the deviations of the Bernstein polynomials from the differentiable functions at the first-kind discontinuity points of the highest derivatives of even order and

demonstrated the same result fails for the odd order case. Then in 2010, Tonkov found the right formulation and proved the result that is missing in the odd order case. It turned out that the limit in the odd order case is related to the jump of the highest derivative. The proofs in these two cases look similar but with many subtle differences, so it is desirable to find out if there is a unifying principle for treating both cases. In this thesis, we obtain a unified formulation and proof for the asymptotic results of both Telyakovskii and Tonkov and discuss extension of these results in the case where the highest derivative of the function is only assumed to be bounded at the point under study.

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The Effect of Deployment on the Families of Iraqi and Afghanistan War Veterans

On September 11, 2001 American Airlines Flight 11 crashed into the north tower of the World Trade Center. This was the catalyst for the Iraqi deployment of over one million American soldiers within the first year, with 352,700 being required to deploy more than once, some even three and four times.1 The goal of my project is to create an artwork that visually captures how the war has affected the family dynamics of deployed soldiers. The chosen setup area will be an installation on FIU campus where it will receive a large amount of pedestrian traffic of students as well as a variety of other viewers, the majority being of the Iraqi war generation. This term describes young children that witnessed the attacks on September 11, 2001 and are now of service age. An installation utilizes space as a dynamic element and is often interactive.2 I believe this type of art work will encourage viewers to participate with the piece and provide the most effect method to communicate the ideas behind it. In order to begin to understand the effects of war on family members, I will be interviewing 12- 20 families, documenting the conversations and subsequently analyzing their responses for reoccurring imagery from which I will develop the ideas for the installation. The installation will be created in order to bring a greater awareness and respect of war's far-reaching effect on families beyond the battle fields' obvious injury and death.

1 Tan, Michelle 2 million troops have deployed since 9/11 Marine Times, 02 November 2011.Web. 18 Dec 2009 <
http://www.marinecorpstimes.com/news/2009/12/military_deployments_121809w/>
2 Rosenthal, Mark Installation art: From Duchamp to Holzer pg 28 Prestel

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Use of dark repair to reform ultra violet damaged DNA by Chlamydomonas reinhardtii after exposure to ultra violet light

Abstract: Sunlight is an important source of energy that is utilized by all levels of life on earth. However, there is a growing concern that the level of exposure to ultra violet radiation will increase with the slow depletion of the ozone layer. This may have a detrimental impact on organisms, especially the primary photosynthetic producers such as Chlamydomonas reinhardtii. Algae have exhibited three types of DNA repair: photoreactivation, recombination, and nucleotide excision repair. Nucleotide excision repair is a light independent repair pathway that is used to repair DNA damage such as pyrimidine dimers. In order to understand this impact I tested for nucleotide excision repair of DNA in C. reinhardtii. Four samples of C. reinhardtii were exposed to 5000J for 6mins 40sec and left in a dark drawer for four different time periods, ranging from 0-90 minutes, for dark repair to occur. After the repair period the DNA of each of the C .reinhardtii samples were extracted and isolated. Isolated DNA was digested with T4 DNA endonuclease 5 that cleaves DNA where thymine dimer pairs occur. After gel electrophoresis bands of DNA fragments were longer in the lanes containing repaired DNA than lanes with DNA having no repair, indicating that dark repair of DNA (removal of thymine dimers) occurred. These results support my hypothesis that dark DNA repair does occur in C. reinhardtii. Currently we are attempting to show nucleotide excision repair by labeling the repaired patch with 5-flourouracil (5-FU), and tagging the 5-FU with an enzyme-linked monoclonal antibody.

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Role of Foxa Genes in Intervertebral Disc Development

Degeneration of the intervertebral disc (IVD) is a common cause of lower back pain, a condition affecting up to 85% of Americans. The IVD is composed of a gel-like nucleus pulposus (NP) enclosed by a capsule of concentric collagen fibers, the annulus fibrosus. Current treatments address the symptoms of disc degeneration, but not its underlying causes. Our goal is to learn more about the little known development of the IVD in hopes that new treatments can be devised for lower back pain. The two genes we are investigating, Foxa1 and Foxa2, are members of the forkhead box family of transcription factors and are present in the embryonic notochord from which the NP is derived. Previous studies have shown that these two genes are essential for the formation and postnatal maintenance of many other tissues; here, we investigate their roles in the IVD. To examine disc development, we knock out Foxa1 and Foxa 2 expression in the mice and study the effects. Lumbar discs from Foxa1;Foxa2 knockout mice exhibit deformed NPs, disorganized vertebral bodies, and severely shortened tails compared to those of control littermates. Potential reasons for this phenotype may be cell death, deviation of notochordal cells, and lack of support from the malformed vertebral bodies. We are also using RNA in situ hybridization to examine gene expression of Foxa targets and other markers known to be involved in the formation of the notochord and surrounding structures. By studying the role of Foxa genes during IVD development, we hope to expand our knowledge about the basic biology

of this structure, which may lead to better treatments for and prevention of lower back pain caused by disc degeneration.

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The Ascent of the Red Dragon: The Dangers of China Becoming #1

Despite the recent economic boom in China, and it's elevation in GDP ranking.
China's rise to the number one largest economy may have some unseen consequences to countries in the world. The overall literature on China is that it's the place to Invest. It's the place that has the riches. It's the place associated with prosperity. We have seen how people have been influenced by others for good, or bad. We have seen how developing countries have looked towards the current richest nation for direction on policies, and how to handle governmental matters. The unseen consequences of China becoming the largest economy in the world can affect us in the U.S. in more ways than one. These consequences range from the national level, to the governmental, to even the personal level. The immediate objective of this project is to exploit these unseen consequences, and bring them to light. Furthermore, to show a possible way to keep the U.S. as the world's strongest and largest economy besides the EU. Lastly, the last objective of this project is to protect the rights of man rather at home in the U.S., or abroad in foreign countries, by exposing a lack of human rights.

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China, Taiwan and the One China Principle

Is Taiwan a part of China, or is Taiwan its own country? In the 1940's China went through a Civil war. The Communist Party of China battled the Republic of China's Kuomintang for control of the Mainland. The Republic of China fled to Taiwan. Meanwhile, the People's Republic of China was established on mainland China. Over the past 60 years China has published a host of laws, principles, and policies that state Taiwan is an inalienable part of China. Taiwan, on the other hand, has pursued different policies under different Presidents of Taiwan. At times, Taiwan's political thoughts on the matter have been the cause of contention with Mainland China. At other times, Taiwan's political thoughts have increased prosperity with Mainland China. In This project we will look into the History of China-Taiwan relations, the One China Principle, and will compare and contrast the viewpoints of Taiwan and mainland China. Further, we will look at possible solutions to bring about peace for the present, and future. The main objective of this project will be to explore the issue more in depth, learn more about

both sides of the argument, and develop our own point of view, while looking for solutions to the One China Principle.

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The Issue of Misclassification: Self-Reported vs. Clinical Measures of BMI in Younger and Middle-Aged Adults

Critical data and statistics gathered by the CDC and similar institutions often use data collection methods that involve both clinical measures and self-report information. Due to issues around feasibility and cost-efficiency, national surveillance studies and reports rely heavily on self-report data collection. Given the current obesity epidemic in the United States, this study assessed the validity of self-reported body mass index (BMI, calculated using self-reported height and weight) versus the clinical 'gold standard' in younger and middle-aged adults (20-49 years of age). This study also examined how discrepancies in self-reporting may vary by subpopulations, characterized by age group, gender, educational attainment, socioeconomic status (SES), and race/ethnicity. A nationally representative sample (n=848) was derived from the National Health and Nutrition Examination Survey (NHANES). Data analysis was performed with Statistical Analysis Software (SAS) version 9.2. The validity of self-reported (SR) BMI was determined by measuring its association with clinically-measured (C) BMI using Pearson's correlations. In order to determine the source of discrepancies in SR and C BMI, correlations between height and weight were also assessed by education attainment level and age group. Results from this study suggest that SR BMI in younger versus middle-aged adults is rather accurate when compared to C BMI. However, the issue of misclassification became evident when the overall difference between correlation of continuous BMI ($r(16) = .937$, $p < .0001$) and categorical BMI ($r(16) = .810$, $p < .0001$) was observed. Healthcare providers and institutions conducting national surveillance reports should acknowledge the possibility of misclassification when interpreting categorical SR BMI and how this issue may interfere with the implementation of health intervention programs.

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The Oracle of Omaha

The purpose of this research was to determine exactly what investment strategies Warren Buffett uses. This was done through the examination of the multitude of firms he has invested in over the years. By examining his actual common stock portfolio and the companies he invested large sums of money in during the last 30 years, Warren Buffett's true strategies at the time of each

investment decision can be derived. Additionally, it was one of my objectives to reverse engineer Warren Buffett's thinking, and identify the true underlying factors guiding his investment decisions. For years, Buffett has been pressured to reveal his specific secrets to investing. Being a man of superior intelligence, he has resisted. He realizes that to reveal his true motivations behind his investments, he would lose the competitive edge he has gained over the years. It would open the door for others to take advantage of the same opportunities he thrives upon. Instead, he has disclosed only generalizations, leaving the specifics up to an investor's interpretation. The basics he has divulged are good starting points, however, for further research into the stocks he bought and the subsidiaries he acquired. I concluded that Warren Buffett does indeed follow the four pillars of his investment strategy that he openly states. He does so by investing in a company (1) that he can understand, (2) with favorable long-term prospects, (3) operated by honest and competent people, and (4) available at a very attractive price. The financial ratios analysis of Buffett's stocks compared to the ratios of the rest of the market's stocks revealed that Buffett does pay on average a lower price for his stocks. The results of the case studies analyzed and the quotes made by Buffett all support the other three tenets of his investment strategy. This hypothesis is therefore confirmed. However, one thing of note is that the Price/Earnings ratio is a more significant factor than the Price/Cash Flow ratio in setting Buffett's stocks apart from others, which is contrary to my original belief. Although Buffett emphasizes the importance of cash flows, earnings are more significant in distinguishing his stocks from others on the market.

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Analysis of the 2011 Tornado Super Outbreak in the Southeast US via Computer Models

The Tornado Super Outbreak from April 25th-28th, 2011 was coined as one of the most powerful and destructive tornado outbreaks to ever affect the Southeast United States. Computer models such as the 850mb (temperature), 500mb (jet stream pattern), Wind Speed (knots), and MSL (precipitation), as well as physical surface analysis models were crucial for accurate predictions leading to the outbreak. Prior to the outbreak, the MSL and 500mb models were in agreement that a strong jet stream was sinking deep into the central United States, sending cool Canadian air southward. On the other end, heavy tropical moisture surged northward with a strengthening low-pressure system trailing it. The mixture of the two air masses combined to generate severe instability in the atmosphere, leading to a high favorability for severe weather. The models were verified on April 24th, 2011 when dew point temperatures were predicted to rise rapidly across cities such as Tuscaloosa, Texarkana, and Shreveport, as well as a sudden drop in atmospheric pressure. In consideration of the impending conditions, Severe Thunderstorm and Tornado watches were issued for multiple areas simultaneously. Subsequent model runs indicated that the strong low-pressure system was predicted to strengthen even further, with the MSL detecting precipitable water values much above normal, leading to the conclusion that more violent activity was forthcoming. 359 tornadoes were confirmed over the 4 day period, 4 of them rated at EF5 strength (>200 mph). The outbreak claimed 337 lives in total,

both direct and indirect. This proposed research project proposes an analytical approach and discussion of the factors responsible for the cause of the tornado outbreak, as predicted by the computer models, and how the public should be more alert of any severe weather outbreak such as the one described.

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Determining the Sex of Juvenile Skeletal Remains via Dentition

Sex determinism in human skeletal remains is difficult under the most ideal circumstances; however, in juvenile skeletal remains it is nearly impossible. Currently no accepted techniques exist to identify the biological sex of the juvenile skeleton, other than, when possible, DNA. Thus, developing an accessible and non-destructive technique would benefit both the field of Forensic Anthropology and Bioarchaeology. The ability to provide a quick and accurate determination of sex would greatly expedite the identification process in any case where juvenile skeletal remains are involved. This pilot project aims to establish an accessible and non-destructive method for determining the sex of juvenile remains using deciduous (baby) dentition. This research is focused on the deciduous dentition as they form early during growth and development, and previous research has demonstrated that secondary (adult) dentition exhibit sexual dimorphism. Samples of known sex individuals (N= 12: 7 female, 5 male, 45 teeth) have been collected by donation. Using a novel approach, physical and digital, via x-ray, measurements of overall tooth dimensions and internal structure dimensions were completed on all samples. Comparative statistical analyses are used to determine if significant sexual dimorphism exists. Initial analysis and results are promising. The results of this pilot project will be used to develop a larger project of which the aims would be to increase the sample size for more accurate statistical results and fully develop this technique for use in the field.

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Binding of Diols onto Mn12 Single Molecule Magnets

Current attempts are in process to bind various diols onto previously synthesized Mn12 Single Molecule Magnets (SMM). The eventual goal is to create linked chains of the Mn12 SMM's. Linking of the Mn12 SMM's into chains would it is theorized drastically increase the magnetic properties and would be a further step forward in their eventual use in nano scale electronics. Current attempts are centered on the use of 1-10 decane diol, 1-5 pentane diol, 2-4 butyne diol

and 1-5 pentene diol. The 1-10 decane diol has shown the most promise with a high yield of crystals which show IR spectra indicative of the decane diol further characterization is being done at this time with powder diffraction and a S.Q.U.I.D. to further elucidate the structure and magnetic properties of the product.

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Effects of Nutrient Concentration and Turbulence on the Potential of Chlorella for Biofuel Production

Microalgae represent a potential high yield source of energy as an alternative to fossil fuels. We designed an experiment to test the effects of nutrient level and turbulence on growth rates in the microalgae, Chlorella, under lab conditions. This group of organisms has been identified as having rapid growth rates and high lipid yields, which are both ideal characteristics for biofuel applications. Our experimental treatments included manipulation of nutrient concentrations and the presence/absence of turbulence via stirring. A basic growth medium with adjustments made to the macronutrients for two of the experimental groups was utilized for the microalgae. Turbulence was administered twice daily by a stir bar and magnetic plate. We quantified growth throughout the experiment using both a direct counts and indirect measurements. The direct counts of algae density were performed using a Petroff-Hauser counter slide, while indirect measures were performed using a spectrometer to obtain spectrometric absorption. Results showed that absorption positively correlated with algal counts. A repeated-measures ANOVA revealed a significant main effect of turbulence on algal growth, and little effect related to the different nutrient levels. The ability to maximize the growth rate in Chlorella is a crucial step for increasing the potential of algae as a major source of future biofuel production.

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Marital Expectations Questionaire: Examining congruence scores in low to moderate income couples with kids

Marital and relationship expectations are what a person pragmatically expects from his or her partner in a relationship. According to McDonald (1981), marital expectations reflect societal norms and individual expectations brought into a relationship or marriage. Expectations include social, physical, libidinal, emotional, and need for financial security (Ngazimbi, Daire, Soto, Carlson & Muyon, 2011). Each person enters a relationship with his or her own experiences and familiarity of previous relationships. Expectations vary depending on the individual's culture and

religion. The current research analyzed marital expectations data from 186 couples (372 individuals) that participated, in a federally funded grant, The OFA TOGETHER Project, which provided marriage education to low- to moderate- income couples with children. The information gathered from the Marital Expectations Questionnaire (MEQ) was used as the foundation for this research. Through examination of the data, we anticipate significant relationships among couple congruence in their marital expectations, relationship satisfaction, and relationship dyadic adjustment.

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Health Care Providers' Perspectives on Male Involvement in Sexual and Reproductive Health Care Needs

Young men are at the greatest risk of contracting STIs within the U.S. male populations, yet are the least likely to make a sexual and reproductive health (SRH) care visit. Clinical approaches in these areas that include the outreach to and the involvement of male partners of female patients can prove particularly useful in expanding SRH care to men and can also improve health outcomes for women who have sex with men. In this study I examined UCF's healthcare providers approaches to educate and involve men (between the ages of 18 and 30) and male partners of female patients in their SRH needs. I conducted qualitative semi-structured interviews with 18 health care providers at the Student Health Center; including physicians, physician assistants, and registered nurses. This study found that there were significant differences in perception of men\'s SRH risk behaviors among the providers. In addition, this study revealed issues that might deter male students from accessing care, specifically how patients are required to state to the operator (who is also an undergraduate student) their name, PID and exactly why they are scheduling a visit to the clinic, thus many men say they have cold symptoms instead of issues with SRH. This study is significant because it can contribute to improvements in the delivery of SRH care to male students on campus.

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Half-Bloods, Heritage, and Narratives of Passing in the World of Harry Potter

The perceived quality of blood and heritage represents a central theme in J.K. Rowling's Harry Potter, lending very obviously to readings of the series as racialized. Scholars have already explored the racial prejudices underlying interspecies and muggle/magical relations, but critical assessment of characters of mixed heritage is surprisingly lacking, particularly given their

prominent influence. In my paper, I will concentrate on these characters, specifically those the series names "half-bloods," or people of both muggle and magical parentage. While half-breed characters' mixed heritage suggests an interesting questioning of the racialized ways the series defines humanity, my focus is on issues of racism and privilege within the human magical community, which current research has largely overlooked. As descendants of two worlds, half-blood witches and wizards occupy a potentially ambiguous space, able to exist unchallenged in either the Muggle or the magical world. I argue that in this ambiguity, these characters' narratives become ones of successful passing, wherein individuals act as an identity for social or material benefit, albeit ones complicated by how their heritages are gendered. Almost universally, half-blood characters' choice to pass into the magical world requires a rejection of varying intensity of their fathers' muggle heritage. This choice reflects an inherent contradiction: maternal heritage is here constructed as not only more powerful than the paternal, but also as the very means of entrance into a patriarchal society and discourse. Undoubtedly, the series' unquestioned presentation of passing narratives is problematic; however, it is also necessarily complicated by its gendering of the inherited dominant discourse. My paper will explore the tensions this gendering creates. What does it imply for those characters whose existence, identities, and operations in a patriarchal space rely on privileging their maternal heritage? More broadly, what are the implications for that space, bounded as it is by the very discourse it otherwise disadvantages?

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Genome Organization in the Human Sperm Cell

Infertility affects approximately one-in-six couples worldwide and has a diverse range of phenotypes, affecting both sexes equally. The most common diagnosis of infertility (15-20%) is idiopathic. Increasingly, genetic factors are being identified in male infertility. The eukaryotic cell nucleus is highly compartmentalized with chromosomes residing in discrete nuclear territories. Nuclear organization correlates with function, and changes in nuclear organization have been associated with disease, (e.g., cancer). This study investigates whether chromosomes exhibit non-random organization within human spermatozoa. Nuclear organization for clinically relevant chromosomes (18, 19, 21, 22, X and Y) will be assayed by fluorescent in-situ hybridization (FISH). Semen samples were obtained from consented patients attending a local IVF clinic. This study has been approved by the FIU institutional review board (IRB). Domain analysis software evaluates probe distribution within the nucleus by dividing the nucleus into five shells of equal area and measuring the amount of probe fluorescence located in each shell. Thus, providing accurate locations of each chromosome within sperm nuclei (interior, intermediate or peripheral). A minimum of 200 cells per probe, per patient have been analyzed. Radial analysis suggests the investigated chromosomes are located in intermediate or peripheral positions. Chromosome 18 is predominantly located in an intermediate/peripheral position (mean shell location of 3.79; n=7), with chromosomes 19, 21, 22, X and Y located toward the nuclear periphery (mean shell locations ranging between 3.94-4.13; n=7). Our data currently provides

evidence of non-random organization of chromosomes within the human sperm nucleus. However, no significant difference in the radial nuclear address was observed between chromosomes. The study will be expanded to include: additional patients, chromosomes, and analysis of nuclear organization by investigating at the 2-D polar distribution (location of probe relative to the sperm tail). Subsequent studies will assess whether a relationship exists between nuclear organization, defective spermatogenesis and/or IVF outcome.

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The Relationship Between Sexual Orientation and Suicide Risk: The Mediating Role of Belongingness

Previous research on sexuality and suicidality has shown a strong link between sexual orientation and nonfatal suicidal behavior worldwide (Mathy, 2002). Individuals who identify as homosexual or bisexual are at greater risk for suicidal ideation, and two to seven times more likely to report a previous suicide attempt, than their heterosexual counterparts (Haas et al., 2011). It has also been found that dimensions of stigma concealment are distinct in predicting abuse, school absences, and depression in homosexual and bisexual youth (Frost & Bastone, 2008). Concealment of sexual orientation poses a problem because it may lead to greater social isolation and lack of social support. The interpersonal theory of suicide (IPTS; Joiner, 2005) posits that in order to have a severe desire to die by suicide, an individual must experience perceived burdensomeness (i.e., feeling like a burden to others) and thwarted belongingness (i.e., feelings of isolation and extreme disconnection). For this reason, young adults that identify as homosexual or bisexual, but conceal it, may be at greater risk for suicidal ideation and behaviors. The purpose of the current study is to examine the mediating role of belongingness between sexual orientation and openness, and suicidal thoughts and behavior. Due to the IPTS, it is hypothesized that homosexuals that conceal their sexual identity will report higher levels of suicidal ideation than homosexuals that are open about their identity. Individuals in this study will complete a series of questionnaires regarding sexual orientation, openness of sexuality, as well as mental health status, mood, and history of suicidal thoughts and behaviors. Future directions and implications will be discussed.

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Southern Europe's DiIemma: Providing humanitarian refugee aid while still maintaining its border security.

Last spring as the Arab uprisings unfolded, I watched as thousands fled Libya in desperate attempts to get to Italy-more specifically the small island of Lampedusa. It was apparent from the onset that Italy needed the aid and intervention of the European Union to cope with this refugee crisis. However, this humanitarian dilemma also raised questions for me about the balancing act that southern European countries, such as Italy, must perform in providing international humanitarian aid while still maintaining their border security. What processes are in place, or under consideration, to promote cooperation among the southern states of the European Union and with neighboring Mediterranean states of the Maghreb region? This humanitarian dilemma cannot be explained simply in terms of the high volume of illegal African migration. Although Africans represent one of the largest numbers of migrants illegally entering southern Europe, it is the more qualitative aspects of the conditions of their migration that has led policymakers to identify these migrants as the subjects of a humanitarian dilemma. The methods of transport, including often-dangerous treks across the sea in unreliable boats, and the migrants' vulnerability to unscrupulous smugglers, distinguish this population of illegal migrants from many (although certainly not all) others who are attempting to make Mediterranean countries their new home. Different estimates place deaths at sea in the early thousands, yet many more arrive to reach their destination. How are these Mediterranean nations moving forward in their response to this humanitarian crisis? These are the dimensions I am exploring as a participant in George Mason University\'s 2012 Undergraduate Research Scholars Program.

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Social Capital - As Plain as the Nose on Your Face(book): Self-Monitoring and Facebook Usage

The purpose of this study was to determine whether individual differences in self-monitoring affect the type of relationships people develop via social media. High self-monitors tend to have large and loosely connected social networks based on social status (Flynn et al., 2006). Conversely, low self-monitors tend to have small and tightly knit social networks based on social equity (Flynn et al., 2006). Social capital refers to social resources people gain from others within their social network (Putnam, 2000). Loose social connections based on gaining information or benefits from outside of one's close social circle is bridging social capital, whereas strong social connections based on emotional support gained from within one's close social circle is bonding social capital (Putnam, 2000). We looked at participants' self-monitoring levels as a predictor of bridging and bonding social capital gained through Facebook use. We also assessed whether individuals' perceived importance of Facebook influences the relationship between self-monitoring and type of social capital on Facebook. One hundred seventy-nine college students with a Facebook profile completed the Self-Monitoring Scale (Snyder, 1974), the Facebook Intensity Scale (Ellison, Steinfeld & Lampe, 2007), and modified versions of Online Bridging and Bonding Social Capital Scales (Williams, 2006). We found both high and low self-monitors use social media for bonding social capital. Low self-monitors did not use Facebook for bridging social capital, whereas high self-monitors did use Facebook for bridging

social capital. High self-monitors' use of Facebook for bridging capital was, however, moderated by the importance they put on Facebook. Our findings were consistent with 'real world' relationships in which low self-monitors have small, integrated social networks based on shared values and high self-monitors have large, segmented social networks based on social status (Flynn et al., 2006).

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The Change in Relationship Satisfaction Scores for Low-Income Couples Participating in Marriage and Relationship Education Workshops

Studies show low-income couples are more vulnerable to relationship stressors. However, research has only recently begun examining effective interventions for low-income couples. Consequently, federal funding has been directed towards treatment interventions which target low-income married couples with children. The OFA Together Project, was a federally-funded program that aimed to improve relationship quality. Therefore, we provided marriage and relationship education workshops to 182 low-income participants. We administered a demographic form and the Relationship Assessment Scale at pre-assessment (RAS; Hendrick, 1988). The RAS, a 7-item measure, assessed self-perceived relationship satisfaction. After assessment, couples participated in a 12-hour, 13 lesson, Prevention and Relationship Enhancement Program (PREP) offered as two six-hour weekend sessions or four three-hour weekday sessions. I examined the change between pre- and post- relationship satisfaction scores, as measured by the RAS. The implications of these findings are discussed.

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The effect of lateral hypothalamic stimulation on taste-related behaviors and neural activity in the gustatory brainstem

The lateral hypothalamus (LH) is an important feeding control center within the brain. When this area is stimulated, feeding behaviors increase (Matsuo et al. 1984). Feeding behaviors can either be ingestive which consist of mouth and tongue movements, or aversive such as gaping. Depending upon the gustatory stimulus presented, different neurons within the reticular formation (RF), nucleus of the solitary tract (NST), and parabrachial nucleus (PBN) are activated. Sucrose (sweet) and HCl (sour), which generally do not cause aversive behaviors (Grill and Norgren, 1977), are two among many taste stimuli which cause different neurons to be activated within the different gustatory brainstem structures. In this experiment, the LH was

stimulated in conscious rats using an implanted microelectrode. During stimulation, 0.1 M sucrose or 0.03 M HCl was infused into the mouth of conscious rats through intra-oral cannulas. Detection of the number and location of activated neurons within the gustatory brainstem was accomplished using Fos immunochemistry. It was hypothesized that electrical stimulation of the LH would increase the number of TR behaviors as well as the number of activated neurons in the PBN, NST, and RF when the solutions of sucrose and HCl were infused. Contrary to the hypothesis, the results show that LH stimulation does not increase the amount of Fos-IR neurons in the majority of the gustatory brain structures. Furthermore, TR behaviors also were not altered by LH stimulation.

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Social Factors May Impact Survival Memory

Recent studies in cognitive psychology have focused on the concept that human memory evolved to assist remembering information relevant to individual fitness. Nairne and colleagues have shown that when rating words relative to survival relevance (stranded in grasslands), retention is superior to many semantic encoding techniques. In the adaptive memory experiments that we have conducted we used the thematic word list paradigm pioneered by Deese- Rodeiger and McDermott, now called the DRM paradigm, to further investigate this issue. This methodology allowed us to measure the tendency to falsely recall a critical word from a set of word lists, each of which centered on that target item. In our original experiment we did not replicate Nairne\'s findings, but we did observe that survival processing of DRM lists increased false memory. Although survival relevant lists yielded greater veridical memory, they also showed greater false memory than survival-irrelevant lists. Because emotional state can influence retention, an additional study was conducted to examine how social anxiety influences true and false memories in the thematic word list paradigm. By extending research on adaptive memory to include a social anxiety environment, we believed this would represent a state that is commonly experienced in survival scenarios. In order to induce this emotional state, some participants were randomly assigned to a condition wherein they were video taped while studying the DRM lists. In a control condition there was no videotaping. As expected, intrusions were higher under videotaped conditions. Results indicated that while in a heightened state of arousal there was no effect on true memory, but there was an influence on false memory. These findings will be discussed with an emphasis on contemporary high arousal situations that may influence the activation of adaptive memories.

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A Reliable Covert Communication Scheme Based on Voip Steganography

Steganography is the science of hiding information amongst other information in such a way that an adversary wouldn't know it existed. A significant amount of research has been done in this field. Mediums that aren't processed in real time have been studied longer, and for these mediums there are many practical steganography tools easily accessible to ordinary consumers. Research on real time mediums, for example Voice over Internet Protocol (VoIP), isn't as mature. While significant and ever-improving research has been done towards increasing throughput and decreasing signs of tampering in VoIP, few have publically attempted to take this research and make practical implementations available to the general public. The authors seek to evaluate current research, produce and finally release to the general public software that would allow two telephone users to covertly transfer multiple pieces of arbitrary information between their respective systems in a reliable manner.

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European Culture and its influence on Classical Music: A focused study on the works of Mozart, Bach, and Lalo

My poster will reflect the project I undertook this summer, for which I was awarded the Stetson Undergraduate Research Grant. My project was centered on my study of Classical Music as a violin performance major, and required me to travel to Vipiteno, Italy, where I participated in the Orfeo International Music Festival. My goal through my studies was to expand my repertoire and enhance my technique as a violinist as well as gain a more global perspective of the European music I was studying by being immersed in European culture. During my stay in Italy, I was able to take a day trip to Salzburg where I visited the birthplace of Mozart, the Salzburg Cathedral, and the Mozarteum University. My research also consisted of lessons and daily masterclasses with the faculty of the Orfeo Music Festival held in Vipiteno-Sterzing, Italy. I was able to disseminate my research when I returned in the Fall Semester by performing a lecture recital detailing the stylistic practices I learned from the faculty at Orfeo as well as historical background I learned from my research. I also participated in Stetson University's annual Concerto Competition. This experience allowed me to reach a new and higher level of musicianship.

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The effect of moderate-intensity exercise training on the cognitive function of young adults with intellectual disabilities

In addition to cognitive impairment, young adults with intellectual disabilities (IDs) are also more likely to be in poor health. Exercise may help ameliorate both of these deficits. While the health benefits of exercise are well documented and understood, the cognitive benefits of exercise is emerging. Exercise has been shown to improve the cognitive function of young, old, and diseased populations but few studies have evaluated the effect of exercise training on the cognitive functioning of individuals with IDs. Therefore, the purpose of this study was to determine the effect of moderate–intensity exercise training on the cognitive function of young adults with IDs. 16 students (age: 19.4± 1.3) with mild to moderate IDs participated in an 8 week exercise intervention program. This hybrid but comprehensive aerobic exercise program included circuit training, aerobic dancing, and adapted sport activities. 45 minute exercise sessions were held three times per week and exercise intensity was maintained at 60-70% of maximum heart rate. Pre and post-intervention, aerobic fitness was assessed via the YMCA step test and intellectual functioning was assessed via 3 subtests from the Woodcock-Johnson® III Tests of Cognitive Abilities. Performance on all 3 subtests was significantly improved (all, $p < 0.002$). Aerobic fitness was also significantly improved but larger gains in fitness were not associated with larger gains in cognitive function. In conclusion, moderate-intensity exercise training can yield robust improvements in the cognitive functioning of young adults with IDs. These effects may be mediated by exercise-induced neuroplasticity.

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Exploration of marine natural products as sources of antibacterial compounds.

The marine habitat, as a potential source of antibiotic compounds, may immensely contribute to the field of antibacterial drug discovery and development. Samples of marine seaweeds and seagrasses were collected from the Key West marine habitats. Compounds produced by these organisms were extracted and the obtained natural product mixtures were fractionated by HP-20 reverse phase chromatography on the basis of the polarity of compounds. Bioassays to explore chemical fractions for ability to inhibit bacteria are underway using 96 micro titer well plates. Specifically, we are analyzing samples for compounds inhibitory toward Pseudomonas aeronginosa and/or Staphylococcus aureus. High-Performance Liquid Chromatography (HPLC) will be employed to isolate the most inhibitory compounds. The techniques of nuclear magnetic resonance (NMR) spectroscopy, Infrared (IR) spectroscopy and mass spectroscopy (MS) will be applied to further understand the chemistry of the most specific bacteria-inhibiting compounds.

The identified antibacterial compounds may have the potential to be synthesized in a research laboratory setting and further tested for applicability as human antibacterial drugs.

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I Buy, Therefore, I Am: Zombification, Abjection, and Consumerism in Paule Marshall\'s Praisesong for the Widow

This project analyzes a theme of social and spiritual resistance to white supremacy in Caribbean and African American literature. Praisesong for the Widow (Praisesong) by Paule Marshall illustrates the issues with capitalist economic structures and participation in mass consumerism manifesting in the novel as a destructive neocolonial presence. Examination of the novel reveals a pervading phenomenon of forgetting cultural and ritual resources of self-protection and local production, resulting in the protagonist's reduction to zombification: Avatara Johnson's discovery that she has been living as a mere consumer-drone rather than as an active socio-cultural participant and producer. This paper, with particular focus on Praisesong, looks at zombification manifesting as a mental and physical illness where the protagonist or a community in the novel goes through various states of abjection, or moments of complete dejection and abasement. Further analysis of Praisesong, similar works, and articles discussing the cultural ruination of individuals and communities as a result of the racist foundations of colonialism reveal that ritual or narrative (artistic) abjection may serve as a gradual approach to a state of spiritual purity and "re-memory" of lost traditions. This process works only with the help of fostering elders or families familiar with the practices and communitarian values of Afro-creole cultures. This project presents Praisesong for the Widow, and similar thematic works, not only as a warning against zombification through consumerism but as an instrument for increasing awareness of communal ethos as a possible salvation for our increasingly globalized, yet individually oriented economies of greed and selfish consumption.

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Subaqueous Podzolic Carbon Influenced by Sea-Level Rise

Global sea-level rise recently estimated at 3.2 mm yr-1 (Merrifield & Merrifield, 2009) drowns coastal forests and associated soils. In areas of low tidal energy, the drowned soil horizons are mostly preserved and typically buried by marine sediments. Forest soils of the southeastern U.S. coastal plain are primarily Spodosols which have a characteristic spodic horizon (Bh horizon). This subsurface horizon of elevated carbon forms when organic matter complexes with Al and

Fe in the presence of poor drainage and a fluctuating water table. Since this horizon is often preserved under rising sea level, it is potentially a long-term carbon sink. To determine the concentration of podzolic carbon and materials remaining in these soils, drowned Bh horizons in four intertidal locations of Florida were sampled. Soil samples were characterized using weight loss on ignition, sodium pyrophosphate extraction of Al and Fe, optical density of ammonium oxalate extraction of Al and Fe, pH, salinity, electronegativity, and Munsell color. The characteristics of the sampled Bh horizons were compared to 326 terrestrial Bh horizons inventoried in the Florida Soil Characterization Database. The drowned Bh horizons have retained most of their podzolic carbon and have characteristics similar to those of terrestrial Bh horizons.

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How a coach's gender and expertise level affect an athlete's performance and satisfaction

As leaders are thought to need masculine characteristics in masculine domains, it is not surprising that men are more often given jobs as coaches in the male-oriented world of National Collegiate Athletics Association (NCAA) athletics. Even with the increase of female athletes in the NCAA, surprisingly, there has been a decrease in female coaches. Consistent with past research, we hypothesize that female coaches will not be viewed as positively in terms of their knowledge about the sport or their coaching ability as male coaches are. However, when participants are aware of the female coach's past successes and experience, we hypothesize that the female coach's evaluation will be similar to that of the male coach. We investigated the attitudes of participants towards a female or male coach who was introduced as an expert or non-expert at a putting task. Participants completed a putting task to measure technical impact of coach and a concentration grid to measure motivation. Participants then completed a survey about their experience with coaches and athletics prior to the experiment and the coach in the experiment. Variables such as motivation of participant, respect for coach, expertise of the coach, and performance of participant, were measured in the short survey section of the experiment.

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The effects of incubation temperature on developmental period and hatchling performance in Ball Pythons (Python regius)

In some reptiles hatchling sex, size and performance are influenced by incubation temperatures. Ball pythons (Python regius) have not been studied in this respect. Ball pythons (P.regius) are

medium-sized nocturnal egg laying snakes from western equatorial Africa. They are extremely popular as pets and are regularly bred in captivity. I hypothesized that artificial incubation of P.regius eggs at higher temperatures would result in shorter incubation times, smaller hatchlings and faster growth rates compared to lower temperatures. I collected the eggs laid from 11 captive P.regius. Using a split clutch design, one half of each clutch was incubated at 32.7°C and the other half of the clutch was incubated at 30.5°C. Both treatments resulted in live hatchlings that were monitored for the first 30 days of life. Statistical analyses showed no significant effect of incubation temperature on egg survival, hatchling sex or mean hatchling mass. However, both incubation time and egg emergence rate were significantly faster at the higher incubation temperature. Both snout-vent length and growth rate showed significant interaction effects of litter by incubation temperature. The results support the commonly held notion that incubating ball python eggs at higher temperatures is the best practice for an industry concerned with how quickly healthy hatchlings can be produced for sale.

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Is Facebook Making us More Selfish?

Recent studies have shown that online socialization is at an all time high with people spending 82% more time on social media sites than in 2010. Currently, it is unclear if the use of online networking is improving responses and actions used to build strong relations, or if technology is creating a buffer, giving individuals a chance to avoid stressful face-to-face interactions necessary in learning responses that allow one to cope in such situations. However, a decrease in the presence of empathetic qualities over the last generation is evident. This change in attitude has led to a more self interested and narcissistic age group which has been labeled “Generation Me” and has caused an increase on the focus of whether online networking is largely responsible for this shift. Participants in the study will be asked to complete an online self-report measure consisting of three scales. The Interpersonal Reactivity Index (IRI) will be used to obtain a multi-dimensional evaluation of empathy. Narcissism will be assessed by the NPI-16, and a modified version of a scale used in a previous study by Reynol Junco will be used to measure Facebook tendencies. Although studies have confirmed an inverse relationship between empathy and narcissism, a direct investigation of patterns of behavior on Facebook and the prevalence of empathy and narcissism in the user has not been previously conducted.

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Fundamental Study of Polyaniline with Reversible Photoacids

Polyaniline is known for its ease of synthesis, low cost, and tunable properties. The photoacid studied is a weak acid (MEH structure) that changes to a strong acid (SP structure) when irradiated. Polyaniline make good electrical patterns, but doping it with reversible photoacids allows the material to be reusable. With thin films as a method of measurement, the combination of photacid and polyaniline can be changed into the pattern of choice. Using a shorter wavelength (300 nm) will revert the material to its initial structure. This process results in an inexpensive, industrial production of reusable materials for electronic devices.
Composites of the emeraldine base form of polyaniline and photoacid were not initially conductive, but when irradiated with 470 nm the conductivity increased. Photoacid donates a hydrogen proton to the polyaniline emeraldine base, forming a polyaniline emeraldine salt. Thin films of composites were prepared by spin casting on glass substrates coated with a gold surface. Polyvinyl alcohol (PVA) was used because it forms a hydrogen-bonding network to help the proton transfer when added to the polyaniline emeraldine base, and photoacid. Preliminary results showed low conductivity, yielding further research.

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The neural and behavioral responses to an umami taste solution in conscious rats.

Taste reactivity (TR) behaviors are characteristic responses to taste stimuli. Based on the palatability of the substance, these behaviors are either ingestive or aversive. Several areas of the brainstem, with their interconnections with the forebrain, determine the behaviors elicited. Little research on the neural activity of the gustatory brainstem or the TR behaviors elicited by umami taste has been completed. The amygdala is located in the forebrain and is associated with behavioral responses based on emotions, motivation, and reward. Although it is known that the amygdala is interconnected with gustatory areas in the brainstem, little research has been done to show how the amygdala influences TR behaviors. As rats received an intra-oral infusion of an umami taste solution (0.16M monosodium glutamate), the central amygdala was electrically stimulated and the TR behaviors monitored. In addition, the number of active neurons in the gustatory brainstem was determined using Fos-immunohistochemistry. Control rats either received the umami tastant without amygdala stimulation or no stimulation at all. Umami caused an increase in ingestive TR behaviors ($p<0.05$) when compared to non-stimulated controls. Also, umami caused an increase in Fos-immunoreactive neurons in the nucleus of the solitary tract (NST) and the parabrachial nucleus (PBN) but not the reticular formation (RF). Electrical stimulation of the amygdala caused an increase in activity elicited by umami in specific regions of the NST and the PBN. In summary, umami taste elicits ingestive TR behaviors and brainstem activity and stimulation of the amygdala modulates the effect of umami on activity in the gustatory brainstem.

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Preparing Future Communication Disorders and Sciences Scholars: The UCF McNair Scholars Program

The McNair Scholars Program is a federal TRIO program funded at over 200 institutions across the United States and Puerto Rico by the U.S. Department of Education. It is designed to prepare undergraduate students for doctoral studies through involvement in research, graduate school preparation, and other scholarly activities. The McNair mission is to increase the number of first-generation college students from low-income families and members of underrepresented groups in the nation\'s professoriate. One of the most important components of the McNair Scholars Program is the faculty mentor/scholar relationship.
This poster details the experience of a University of Central Florida Ronald E. McNair Scholar student majoring in the Communication Sciences and Disorders undergraduate program. Specifically, this poster describes the mentor/scholar relationship and its impact on promoting research and scholarly activities that will directly impact the educational progression of the McNair scholar. Additionally, the scholar worked with a master and doctoral student to acquire research skills in order to design a pilot study focusing on language and literacy. The poster will describe the scholars path to the McNair Scholars Program, accomplishments during her involvement, the essential relationships built that aided in the research process, and the resulting body of work derived from these collaborations.

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The Effects of Time Pressure on Basketball Free Throw Shooting The Effects of Time Pressure on Basketball Free Throw Shooting The Effects of Time Pressure on Basketball Free Throw Shooting

The present study looked at the effects of time pressure on performance and mechanics. Thirty-eight undergraduates (n=5 elite, n=16 skilled, n=17 inexperienced) at the University of North Florida participated in a free throw task. Elite level participants were players currently on the University of North Florida men\'s NCAA basketball team, while skilled players self-reported more than two years of competitive basketball experience. Each participant shot free throws in timed, untimed, and goal-oriented conditions. In the timed condition, participants attempted to make as many shots as possible in 24 seconds. In the untimed condition, participants took the same number of shots as they did in the untimed trial but without any time constraint. In the goal-oriented condition participants were told they needed to beat their previous score in the same 24 seconds as the timed trial. It is expected that the elite level athlete\'s shooting percentage will remain constant despite increasing levels of time pressure as compared to skilled athletes

whose percentage should see a decline as time pressure increases. Elite level athletes should maintain more consistent shot mechanics as time pressure increases as compared to skilled athletes whose mechanics should become more variant with increasing time pressure. Results include that the time condition had the worst shooting accuracy while goal-oriented and untimed had similar shooting percentages. This indicates that the benefits of taking your time and having a goal-oriented focus are, in terms of performance, equal.

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What makes viral recombination host specific?

The most important function of a biological entity is to copy its genome and pass it on faithfully. Viral replication often uses viral recombination proteins and host replication proteins. Viral recombination can be used for genome engineering such as when foreign DNA is incorporated into a cellular genome. However, this process occurs best in the virus' host and therefore, shows host-specific tendencies. The purpose of this research is to determine what makes viral recombination host specific, hypothesizing that specific protein-protein interactions result from the co-evolution of viral and host proteins. We have cloned the genes for two recombination proteins (Beta and Exo) in two allelic states (full length and truncated at putative protein interaction domains) and fused each to a Halo Tag. We expressed these fusion proteins in E. coli, and purified protein complexes using high stringency affinity chromatography on Halo Link resin followed by TEV protease cleavage to elute complexes. These complexes were fractionated by SDS PAGE and subjected to mass spectrometry and bioinformatic analysis. We confirmed that Beta and Exo form a SynExo recombinase complex. Among newly identified putative complex components is a protease known to be part of a system to regulate bacteriophage Mu replication and transposition (Lon plus associates such as ClpPX) and proteins associated with host replication and recombination functions (DnaT, involved in recombination-dependent replication, RuvABC, the Holliday Juntion resolvase and YejH, a putative helicase). These ongoing studies may shed light on factors contributing to host-specificity of "Recombineering".

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Effects of Different Algal Diets on Growth in Florida Freshwater Snail Floridobia floridana

The goal of this study was to measure the effects of variable algal diets on growth of the Florida spring snail Floridobia floridana. The genus Floridobia contains a group of small snails native to

the freshwater springs of Florida. Our study species F. floridana can be found in Volusia Blue Spring as well as throughout the St. John's river basin. The main diet of Floridobia is comprised of algae. Different species of algae naturally vary in nutrient content; some being more nutrient rich than others. Filamentous genera, including Lyngyia and Vaucheria are thought to be a poorer quality food sources as opposed to nutrient rich diatom algae of the genus Nietzchia. Within the past decade Blue Spring has experienced an increase in filamentous algae species that are invasive to the natural algal community. Based on a possible shift in algal composition within the spring, this study sought to evaluate how growth of F. floridana would be affected by different algal diets. We collected 360 snails and measured their growth over a period of nine weeks. They were divided and subjected to three treatment diets each of which was equalized and administered in proportion to the lowest carbon content treatment. These included a mixed diet of filamentous algae and diatom algae, a diet of only filamentous algae, and a diet of only diatom algae. We hypothesized that diatoms would provide a better diet for faster growth in the snails than filamentous algae. We also hypothesized that the mixed diet would provide the best diet for snail growth. Our data did not support a significant difference between filamentous and diatom treatments, and although in both growth periods the mixed treatment showed higher average growth than both other treatments it was only statistically significant in the first growth period as compared to diatoms.

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Gender Differences in Coping Styles Among College Students with a History of Alcohol Uste and Depressive Symptomatology

Research findings show women are twice as likely as men to experience depression and that men are more likely than women to experience alcohol-related problems. The purpose of this study was to evaluate potential explanations for gender differences in depressive symptoms and problematic drinking. I hypothesized that coping styles would account for the presence of such gender differences. The study sample consisted of 249 racially and ethnically diverse college students (182 women; mean age = 19.96) who completed self-report questionnaires on depressive symptoms, alcohol use, rumination, and distraction. Contrary to my hypothesis, women did not display significantly higher mean levels of depressive symptoms but as hypothesized, women reported a higher mean tendency to ruminate. Men reported a significantly higher mean tendency to engage in distraction-oriented coping but contrary to my hypothesis, mean levels in alcohol use were not significantly different between men and women. Gender did not moderate the associations between coping styles and symptoms of psychopathology. These findings and additional results are discussed in light of past research and theories.

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Building-Integrated Photovoltaics

"American innovator Thomas Edison once said, "Not only will atomic power be released, but someday we will harness the rise and fall of the tides and imprison the rays of the sun." Although these words were spoken nearly a century ago, his bold prediction regarding the use of solar energy has only recently begun to become a reality. This poster presentation will cover the variety of solar panel technologies currently on the market. It will explore the effects that altitude and latitude have on solar panel performance, based on data gathered from St. Petersburg College\'s current array compared with data from an identical array in Littleton, Colorado. Finally, this presentation will showcase the cooperative learning experience implemented by the Florida Engineering Student chapter at St. Petersburg College to select a 17.3 Kilowatt CIGS Photovoltaic array.

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A Case of Double Consciousness: Americo-Liberians and Indigenous Liberian Relations 1840-1920.

This study argues that the formation of Americo-Liberian identity overwhelmingly relied on White American middle class cultural values despite the founders' criticisms and rejection of racial oppression and slavery. Americo-Liberians' previous participation in a culture that downgrades African heritage fostered the internalization of Western notions of civilization and African inferiority that led them to establish an oppressive regime similar to the one they had escaped from, and even enslaved the indigenous population, which they considered 'uncivilized.' The study thus investigates how formerly oppressed and enslaved blacks became oppressors and enslavers of other black people in the name of a 'civilizing mission.'. The relationship that developed between Americo-Liberians and indigenous Liberians provides a case study to explore the impact of White supremacy ideology on enslaved Africans and racial uplift ideology. Building on contributions of social theory and conflict theory my analysis of Americo-Liberians demonstrates how social class and ideology interacted to produce socio-economic developments that led to the Liberian Civil War. This study covers the founding of Liberia as a republic during the 1840's through the League of Nation's intervention in 1928. It is during this time period that Americo-Liberians fostered an exploitative and colonizing relationship with the indigenous Liberian population. Previous scholarship regarding Liberia engages in descriptive analysis this study is the first to employ the theoretical framework of double-consciousness to further illuminate the ambivalent positions of the Americo-Liberians vis-a-vis indigenous Liberians.

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Deus ex Machina and Manipulation of time in "A New Refutation of Time," "The Secret Miracle" and "The Other Death"

The importance of time in Jorge Luis Borges' oeuvre is undeniable. Oftentimes, Borges' fascination with the fourth dimension is manifested through fantastic themes. In his fiction, whenever Borges plays with the deconstruction of time—from subjective linear time to an infinite time uninhibited by temporal succession—, he alludes to enigmatic philosophical issues; such as the relationship between infinity and death. In his essays Borges is not as subtle, he conspicuously theorizes, critiques, and expounds on the issues that interest him. It is not surprising that many of Borges' stories and essays explore time and death. What is peculiar is Borges' fascination with the relationship between God, death, and the deconstruction of time. This idiosyncrasy seldom finds its way into Borges' essays. For this reason I will explore one of Borges' essays, "A New Refutation of Time," and draw a connection to two of Borges' stories, "The Other Death" and "The Secret Miracle." These stories have a strong religious undertone and through a close reading I will show that the God figure in these stories is also present in "A New Refutation of Time," although the essay does not address God directly. Such an analysis sheds light on Borges' spirituality and his relationship with religion. It also adds an alternative reading to a seemingly secular text.

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Orbitofrontal sulcal structure, executive functioning, and prenatal cocaine exposure

Abstract: The orbitofrontal cortex is receiving increased attention for its role in the development of executive functioning throughout childhood and adolescence. Due to a high concentration of dopaminergic receptors, orbitofrontal cortex could be vulnerable to fetal cocaine exposure. In this study both executive functioning and orbitofrontal cortex were examined in 25 children prenatally exposed to cocaine and other drugs and in 16 matched controls (ages 14-16). Executive functioning was tested with the Stroop Color and Word Test, Trail Making Test, Iowa Gambling Task, and Wisconsin Card Sorting Test. Volumetric MRI scans were obtained on a 3T Philips Achieva. The connectivity of the lateral, medial, and transverse orbital sulci was classified using the typology of Chiavaras and Petrides (2000) as modified by Chakirova, et al. (2010) (types I-IV). This method has been successful in showing orbitofrontal sulcal abnormalities in both schizophrenia and autism. We predicted that cocaine exposure would alter brain development resulting in increased numbers of sulcal interruptions (rare types III and IV) due to decreased sulcal depth. We also predicted that executive functioning would be less well-developed in children with interrupted sulci. Contrary to our hypotheses, cocaine exposure was not association with changes in sulcal connectivity or executive functioning in the sample as a

whole. Although maternal cocaine abuse, by itself, did not directly affect sulcal formation of offspring, low birth weight children exposed to cocaine in utero were found to have a significant increase in rare types III and IV in the left hemisphere ($p<.05$). This finding is compatible with the known asymmetric, prolonged development of the left hemisphere and implicates increased susceptibility to atypical brain development in slowly developing fetuses exposed to cocaine.

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The Effects of Fire on Groundwater Chemistry: Initial Observations

Previous research in groundwater chemistry has indicated that groundwater metals and inorganic nutrients can be significantly affected by the clearing and burning of the land surface. The primary objective of this project is to obtain a greater understanding of the effects fire has on groundwater chemistry. A secondary and perhaps equally important goal is to determine the impact of precipitation events on groundwater chemistry within burned forested areas. Groundwater sampling wells were installed within burned and non-burned areas of the study area located within the University of West Florida west campus. Groundwater samples were collected and tested for physical parameters, including turbidity, temperature, salinity and dissolved oxygen content, as well as for dissolved inorganic nutrients. Groundwater samples were also collected from the study site immediately following a rain event. Spectrophotometric methods were used for sample analysis. Burn site pre-rain samples showed higher concentrations of both nitrite and nitrate. The recorded precipitation event appeared to have caused a possible shift in groundwater nitrogen speciation from nitrate to ammonium within the burn site. The nutrient fluxes following the precipitation event were generally larger within the burn site as well. This suggests that groundwater beneath the burn site is more dynamic than that under the control site.

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The Effects of High Infant Mortality on Juvenile Mortuary Practices

In this poster I summarize my investigation of the effects of high infant mortality on juvenile mortuary practices in a cross-cultural sample. My study focuses on high infant mortality and its impact on the social perception of fertility, as well as beliefs about the soul and funerary practices. My data is collected from the Human Relations Area Files (HRAF) ethnographic and archaeological online database. I am examining the hypothesis that fertility will have a higher socio-cultural importance in cultures with a high infant mortality rates. Furthermore, in these cases, the soul of deceased children will be seen either as dangerous or advantageous to the

mother's fertility. I expect that burial rituals will reflect the importance of fertility and the discordant perception of children's souls.

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The Nature of Love: A Phenomenological Approach

Since the time of Socrates, the idea of love and the conception of the human heart have been devalued by thinkers who, by definition, are known as 'lovers of wisdom.' Considered pejoratively as 'the passions,' these subjects were deemed inferior to thought related to the human faculty of reason. Many studies in the sciences, from biology to psychology, claim to have pointed us to the source of the human experience of love-but do they help us to properly understand love? In order to provide a full consideration of love in this work, I shall consider love primarily under the philosophical lens of phenomenology. The study of firsthand human experience, phenomenology became the influential school of thought for many German philosophers in the twentieth century. My research will closely examine the writings of moral phenomenologists, including Max Scheler to Dietrich von Hildebrand. I shall attempt to disambiguate the common assumptions regarding the nature of love. Is there a fundamental difference between the phenomena of 'falling in love' and love itself? I question whether love in essence is defined by the element of choice - of a willing emotional giving of oneself to another- and whether it can be distinguished from a passive feeling and an active loving will. I aim to bring the human affective sphere into the full light of philosophical inquiry, considering whether love is a moral act of the will that involves a total participation of the self-in mind, body, and spirit. Love is arguably the most powerful of the human emotions, one that elevates the human sphere of emotions and the ethical existence beyond simple desire. As I hope to show, a philosophical study of love is highly relevant today, since the sciences have not properly answered the perennial question: What is love?

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The effect of dietary divergence and founder populations on tooth curvature and sharpness in two closely related monitor lizards.

Nile monitors (Varanus niloticus) are large carnivorous lizards that occur throughout sub-Saharan Africa, and have recently become invasive in southwestern Florida. Most closely related to the Ornate monitor (V. ornatus), the two species differ in geographic distribution and diet. Ornate monitors are active foragers that feed primarily on crabs as juveniles and adults, while the Nile monitor's diet is known to change with habitat, seasons, and age. Ornate monitors

have been described on the basis of a small number of soft-tissue characteristics, creating a problem for natural history museums with osteological specimens that lack appropriate complementary skins, as many Ornate monitors have been cataloged as Nile monitors. In an effort to identify osteological or dental characters that can be used to easily and reliably distinguish the two species, we have begun a study of tooth morphology. Using digital photography, CT scans, 3D laser scanning, and image analyses, mandibular teeth were analyzed for differences in tooth curvature and sharpness in wild-killed specimens of the two species. In addition, we compared tooth morphology between African V. niloticus and specimens from the invasive Florida population. Teeth from V. niloticus exhibit significantly more pointed teeth throughout the mandible than those found in V. ornatus, though this can be obscured in very large specimens. Further, tooth profiles differ significantly in the two groups, with Nile monitor teeth being notably more conical, compared to a bulbous morphology found in the Ornate monitor. The native African specimens of V. niloticus can also be compared to the invasive Florida population using these variables, as well as other anatomical differences between these populations. This research will allow clarification of museum specimen affinities, critical to future research, and supports on-going research into the morphological divergence of invasive animals from their parent populations.

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What is Appealing?: Sex and Racial Differences in Perceptions of the Physical Attractiveness of Women

Beauty and physical appearance are two things that are considered to be of great importance in today's society. In the U.S. today, many people strive for physical perfection, and much attention is focused on one's exterior and the way one looks. A beauty ideal has been created over time through the combination of several elements within American culture, and this ideal image attempts to define female beauty as fitting into a certain mold. Certain characteristics have been deemed the most attractive when it comes to female physical attractiveness, and a model of beauty has been presented by the media. This research focuses on whether or not everyone buys into that ideal. Surveys were administered to 300 University of Central Florida students age 18-35. Participants were asked about ten different physical characteristics relating to women, and were asked to choose the characteristic among a group of options that they found the most physically attractive or beautiful. Through univariate and bivariate analysis, this research evaluates if the male perception of female beauty differs from the female one and assesses if race influences these perceptions. Results showed that both sex and racial differences do exist, and that there are variations in what different people consider beautiful. While there have been studies related to topics such as these, there are very few if any studies such as this one, which focuses on both gender and racial differences in relation to perceptions of the physical attractiveness of women as well as on the views of both sexes on women as opposed to their views on the opposite sex.

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Hurricane Irene Coverage

During the summer of 2011, Hurricane Irene made landfall in North Carolina continued up the eastern U.S. seaboard into Maine. The billion-dollar storm was covered non-stop by meteorologists both on and off camera, and among these professionals were three college students getting industry experience before stepping foot into the career world.
Maine Public Broadcasting Network (MPBN) in coordination with Dr. Lou McNally at Embry Riddle Aeronautical University (ERAU), enlisted three of its broadcast meteorology majors that provide regularly weekly forecasts for the network, to ramp up coverage of Hurricane Irene for twelve hours, as it approached and crossed the state of Maine. Broadcasts were provided every 30 minutes, and students utilized outside resources to provide additional information to MPBN, such as power outages and flooding, with minimal supervision from their professor.
This opportunity gave the students on air experience during a major weather event that is normally not obtained until one has spent years in their career. Acquiring the hands-on experience provided training on event coverage of short-fused severe weather coverage as well as solid resume material for future use. Students had to work as a team on not only getting the weather related information and developing current graphics, but also performing, and providing support as floor director, camera operator, and point-of-contact for MPBN.
The Meteorology program for broadcast media majors is unique at ERAU. The state of the art lab allows students to put together real life situations before graduating, thus enhancing their learning experience. Using these skills in a real life situation provides a level of experience unavailable elsewhere. This paper will outline the procedures used to successfully complete the request for updated reports in a severe weather situation.

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Practical Investigations on Platform as a Service (PaaS)

This poster will focus two major platforms (PaaS): Google App Engine and Microsoft Azure. We will use healthcare cloud as case study to compare those two platforms. Recently, the outsourcing of computation and storage resources cloud computing is becoming very appealing. Cloud computing offer the possibilities for medical data (i.e. personal information, billing information, etc.) to be stored in a centralized secure location. However, with cloud computing there are risks and challenges in respecting how privacy and security of this important information will be maintained. We will be exposing future platform for Healthcare cloud, and focus on client platform security, which is a crucial aspect of the system. One solution we predict

foresee is to present an architecture that creates private domains for healthcare infrastructures, which will provide client platform security along with network security concepts. We will discuss and report our study in this poster.

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A Geospatial analysis of the Osprey Fountains Residence Hall

Seeking to study the effects of construction on the local environment of the eastern ridge of the University of North Florida for the newest installment in Residence Halls Construction Phase IV also known as The Osprey Fountains was analyzed. In order to accomplish this, a GIS system was used to map the super local, surface and sub surface features of the surrounding area in order to analyze the effects of different environmental pressures consisting of rainfall and drought. This analysis may not provide conclusive results due to the fact that real, ground-truthed data does not exist for the area with the addition of the new Residence Hall. However it will at the very least bring to light some concerns dealing with the construction and its impacts.

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Measuring the genetic effects of a recent population bottleneck of the keystone urchin species, Diadema antillarum

When a species undergoes a mass mortality event that greatly reduces genetic diversity, known as a genetic bottleneck, the effects on the surviving populations are of considerable interest. Diadema antillarum, the long-spined sea urchin, is a keystone species in Caribbean coral reefs for its role in consuming macroalgae. In 1983, the species underwent a disease-induced bottleneck event causing a 98% population reduction. The absence of D. antillarum negatively impacted corals, causing algal biomass increase of 22-439% across reef zones within 16 months. Recently, D. antillarum has shown a slow, progressive comeback in many regions. Many studies have evaluated the ecological importance of D. antillarum, but genetic studies have yet to utilize more comprehensive and sensitive methods to determine the lasting effects of the bottleneck. We examined how the bottleneck event affected the current genetic diversity of D. antillarum, using individuals collected from 13 populations across the Caribbean, including populations in the U.S. Virgin Islands, the Florida Keys, Jamaica, Brazil, and Belize. We optimized microsatellite primers for eleven loci and used these markers to analyze the genetic diversity between these locations. Preliminary results show surprisingly high genetic diversity for a species recovering from such a severe bottleneck event. Fixation index (FST) values are very low, indicating low genetic differentiation between populations, possibly due to high gene

flow facilitated by ocean currents. Our findings shed light on the genetic consequences of massive die-off in a widespread species.

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Does This Job Make Me Look Old? Theoretical Implications of Age Type on Discrimination

The older population is growing rapidly and businesses must prepare for changes in their workforce. Cases of age discrimination have also become more common. Older workers are being forced out of their jobs at a faster rate than any other age group. As a result, older workers commonly take jobs in different careers, where they compete with younger workers who have similar relevant experience and are valued for their youth. Both prototype matching theory and career timetables theory state that people hold stereotypes of the job in addition to stereotypes of people. In laboratory research, a mismatch between the age of the worker and the age-type of the job has led to lower evaluations, lower job suitability ratings, and other indicators of discrimination. Despite this evidence, no age-type study has been performed outside a laboratory setting. The purpose of this study is to determine whether the construct of age-type is related to discrimination in the real world. Real life instances of discrimination will be attained from a random sample of 350 age discrimination cases filed in 2011. Each job in the sample of cases examined will be rated to determine age type, perceived proportion of older and younger workers in the job, normative age, and importance of stereotypically older worker features. We expect that all forms of age stereotypes will be related to real world instances of workplace discrimination. Specifically, the number of claims filed and the number of rulings in favor of the older worker will be greater in jobs that are more strongly young-typed, have a low representation of older workers, and require features that contrast with stereotypically older worker features. With such findings, we will enhance our understanding of the nomological network for the psychological construct of age type by linking it to real world discrimination outcomes.

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Curbing Academic Dishonesty

Academic dishonesty is becoming a rapidly developing epidemic among higher education institutions, and time tested honor codes prove useless. The rise of the internet has facilitated the vast majority of cheating accruing among college students. This paper researches the possibility of a better implementation of an already existing Honor Code and its effects on curbing

academic dishonesty. The research done is an extension of work previously undertaken by Daniel Ariely.

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Crisis, Questions, and Cures? Public Health of the Peruvian Amazon Rainforest

One right established under the Universal Declaration of Human Rights is access to adequate healthcare. For many indigenous and rural peoples throughout South America, especially in the Amazon Rainforest, this fundamental right is not being properly met. The Loreto province of Peru provides a striking example. The Peruvian government has claimed that free universal healthcare including diagnostic and specialized medicine was available for all citizens. This care only carries the caveat of a birth certificate and appropriate paperwork. These official papers are difficult, if not frequently impossible, for many native peoples living on traditional lands to obtain. To further compound the issue faced by the fortunate few with government papers, actual medical care provided in this area is severely limited. Healthcare facilities visited over the past summer proved to be not only understaffed, but also poorly stocked with outdated or nonfunctional equipment, as well as severely lacking basic but life-saving drugs. Following personal exposure to this, my partners and I have initiated multiple steps to develop a pragmatic solution. After extensive literary research in the field of public health theory we developed a model to providing rural healthcare that incorporates the lessons and innovations that have been implemented around the world. Our approach will be actively compared to other models on the basis of pre-existing epidemiological, sanitary, and general health statistics for Loreto. Our finalized model will be implemented in Loreto, Peru over the course of several years with the help of private funding in the hopes of improving both the quality of life and the longevity of indigenous peoples in this small portion of the Amazon basin. Should results of these research efforts prove successful this public health model may be applicable to other areas suffering similar detrimental conditions.

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Peruvian Healthcare Reform

The Universal Declaration of Human Rights lists civil liberties possessed by all humans including rights to fair treatment under the law, safety from violence or persecution, and freedom of expression. One right established under the Declaration is access to adequate healthcare. For many indigenous and rural peoples throughout South America, especially deep in the heart of the Amazon Rainforest, this fundamental right has been grossly violated. The Loreto province of

Peru provides a striking example. The most recent Peruvian administration claimed that free universal healthcare including diagnostic and specialized medicine was available for all citizens. This care only carries the caveat of a birth certificate and appropriate paperwork. These official papers are difficult, if not frequently impossible, for many native peoples living on traditional lands to obtain. To further compound the issue faced by the fortunate few with government papers, actual medical care provided in this area is severely limited. The government operated healthcare facilities visited firsthand during the summer of 2011 proved to be not only understaffed; but also poorly stocked with outdated or nonfunctional equipment, severely lacking in fundamental instruments of care, and having an extreme shortage of basic but life saving drugs. When crumbling infrastructure is combined with a frequently corrupt and horribly inefficient system, one begins to realize the true magnitude of what this infringement on human rights means for suffering individuals. Following personal exposure to this dilemma, I and my partners have initiated multiple steps to develop a pragmatic and real world solution to these problems. Our proposed solution was the result of extensive literary research in the field of public health theory. Our 'solution' will be continually compared and contrasted with both previously successful and unsuccessful efforts from around the world in the hopes of avoiding known pitfalls while replicating beneficial outcomes. These prior healthcare models will be actively compared on the basis of existing epidemiological, sanitary, and general health statistics for Loreto. Our finalized model will be implemented in Loreto, Peru over the course of several years with the help of private funding in the hopes of improving both the quality of life and the longevity of indigenous peoples in this small portion of the Amazon basin. Should results of these research efforts prove successful this novel public health model may be applicable to other areas suffering similar detrimental conditions.

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The Effect of Kinase Inhibitors on Junin Virus Entry

Junín virus (JUNV,) a New World arenavirus, causes Argentine hemorrhagic fever. JUNV is spread through contact with Calomys musculinus rodents or through aerosolized excrement and is a bioterrorism concern. JUNV infects cells through the binding of its glycoprotein (GP) to transferrin receptor 1. Due to the necessity of a BSL4 facility to work with JUNV, we used a non-replicating Junín pseudovirus that allows us to test viral entry in a BSL2 facility. The pseudovirus has a murine leukemia virus (MLV) core and genome in addition to the JUNV GP. Using this pseudovirus, our lab performed a high through put siRNA knockdown screen to identify additional host molecules involved in entry. From this screen, we found several genes in the MAP kinase (MAPK) pathway, as well as growth factor and cytokine receptors that signal

through cellular kinases, which positively affected virus infection. To confirm and extend the results of the siRNA knockdown, I tested known chemical inhibitors, including genistein, a tyrosine kinase inhibitor, U73122, a phospholipase C inhibitor, and rapamycin, an mTOR inhibitor. I treated U2OS cells with the inhibitors, and then infected them with Junín pseudovirus. The cells were stained with anti-lacZ antibody and DAPI, a nuclear stain permitting the quantification of total cell number. The cells were visualized by an automated microscope, and the percent infection quantified using computer software, Meta Xpress. I also tested whether the inhibitors affected infection by pseudoviruses bearing the vesicular stomatitis virus (VSV) G protein or the MLV envelope (Env). Our preliminary findings showed that both genistein and U73122 decrease viral infection, while rapamycin has no effect. This suggests that JUNV utilizes phospholipase C and tyrosine kinases as host factors for viral entry. Determining the roles of these host molecules and their inhibitors allows us to better understand the JUNV entry process and to identify novel targets for antiviral drugs.

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Hand Size Estimation is a Predictor of Clinical Pain in Fibromyalgia

Fibromyalgia (FM) is a chronic musculoskeletal pain syndrome that frequently results in disability. FM patients often complain of perceived changes in hand size. Thus, we investigated the influence of pain on hand size perception. Because patients with phantom pain experience their missing extremity as diminutive, we hypothesized that individuals with FM pain would also estimate their extremities as smaller than actual size. Randomized scaled (+/-) images of the participant′s non-dominant hand were shown to normal pain-free controls (NC) and FM patients in a series of 4 slideshows. The subjects were asked to identify their hand size in each slideshow. We used pressure to the ear (to induce pain) during hand size estimates. It was evaluated how their image selection varied with their reported pain levels. We enrolled 43 NC and 33 FM female subjects into this study. There were no significant correlations between age and estimated hand size ($p > .05$). Clinical pain of FM subjects was 3.5 (1.4) VAS units and correlated with hand size estimates during experimental pain ($p = .04$). Clinical pain of NC was minimal (.1 VAS units). In contrast to NC, FM subjects significantly underestimated their hand size at baseline ($t = 2.1$; $p = .04$). During experimental pain, hand size estimates significantly decreased within but not between both groups ($p < .001$). Overall, hand size estimates of NC and FM patients seem to decrease with pain. As hypothesized, FM subjects perceived their hand size as significantly smaller than normal with further decrease during experimental pain. In addition, during experimental pain their hand size estimates significantly correlated with clinical pain. Our findings suggest that hand size changes perceived by FM patients are dependent on their clinical pain and similar findings may be obtained in other pain patients.

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Youth Evolutions: From Communist to Post Communist East Central Europe

Given the recent events that took place in Africa and the Middle East, one cannot help but think back to the years of revolutions in East Central Europe. These youth-driven events are not unlike the youth participations in the uprisings held against the communist systems in East Central Europe. Unlike these events, in East Central Europe, the youth's role was an evolutionary process seen actively in the 50's, 60's, and even the 70's as tools of the communist governments in the form of Communist Youth and propaganda. In the late 80's and early 90's, large, mobilized groups of youth demanding reforms defined the youth movements of the time and served as the models for youth movements of today. My proposed University Scholars project combines a focus on the history of Communist Hungary, Czechoslovakia, and Poland in order to make a connection to the youth of post communist East Central Europe. By focusing on the role of youth throughout the communist regimes, I will attempt to discover the effects that the past has had on the politics of today's youth. The purpose of my research will be to answer questions of how history has affected the identification of today's youth in a political sense. Has there been a decline of youth participation in politics in East Central Europe, and if so why? Have the past movements of youth, which were so essential for the downfall of the communist governments in the region, inspired the youth of today? I want to further explore how far the history of the area, which caused mass mobilizations and underground movements has effected the regions youth, and if it has, what has it given birth to; a more mobile and participatory youth or one of acceptance and lack of interest?

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The Benefits of Companion Planting: Experimenting with Okra and Sunflower/Cabbage and Sage

Companion planting is a method of gardening in which two or more plants grown in close proximity harbor an advantageous relationship ('companions') to the benefit of one or more of the combined plants. Two experiments on companion plants were conducted at the UCF Arboretum's Garden: one with sunflower and okra where the sunflower is known to attract pollinators with its heightened display of color and aroma, and the second with sage and cabbage where the sages' odor deters pests from its companion, cabbage. It was hypothesized that because of these beneficial effects of companion planting, a greater harvest yield would result in

the experimental plots in terms of vegetable weight and length/circumference, than the vegetables grown in control plots without their companion plant.
The experiments were run separately according to season and consisted of three experimental and three control plots where data on the number of pest and beneficial insects, stem height, and abnormalities were recorded during growth. At harvest, the vegetables′ weight and length/circumference were recorded to find that the vegetables in the experimental beds significantly benefited by the companion plants′ known roles, but the harvest yield didn′t differ between experimental and control plots. These results show that the benefits of companion planting, in these cases, guaranteed pollination and virtually eliminated the need of insecticides. Experimental findings help to promote a greener, cheaper, and less labor intensive form of gardening that can be used by not only the Arboretum′s staff and volunteers, but also other Central Florida gardeners.

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Transcriptomic Profiling of Ribosomal Protein Pseudogenes in Diverse Human Tissues

Ribosomal proteins play a vital role in protein synthesis and cell functionality. Ribosomal protein (RP) pseudogenes have been identified in different positions of the human genome and these regions are considered non-functional DNA. We profile the transcriptome of RP pseudogenes through a unique RNA-Seq pipeline and identify significant expression for a number of pseudogenes across sixteen human tissues. As expected the majority of pseudogenes have no observed expression across all tissues. Interestingly, some pseudogenes exhibit significant expression levels. We identify two patterns of gene expression; those expressed across numerous tissues and those with high tissue specificity where expression is observed in a single cell type. The highest expression levels for RP pseudogenes exhibit high tissue specificity and are comparable to expression of normal RP genes. Genomic regions surrounding expressed RP pseudogenes are examined. There are 80 normal RP genes in the human genome, but over 2000 annotated RP pseudogenes. Therefore, numerous RP pseudogenes arise from the same RP gene parent and have high sequence identity. A novel RNA-Seq pipeline was developed in order to accurately measure transcription activity between these highly similar genome sequences. We employed a strict alignment protocol to ensure accurate read alignment and we incorporated the concept of unique genome locations (uniqueome) to further filter out alignments of low confidence. A precompiled uniqueome marks locations of the genome where sub-sequences matching parameters of our RNA-Seq data is unique within four mismatches to any other genome location. All reads not lying across a uniqueome location were removed. Expression values are calculated using reads per million mapped reads per kilobase of exon (RPKM). Length of exon was calculated using only gene exon locations overlapping with the uniqueome dataset. Further work will involve analysis of biological reasons for ribosomal protein pseudogene expression and will elucidate possible functional networks.

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Localization of Dex-propylamine-1X in PC-3 and RWPE-1 prostate cells

We examined the selectivity of Dex-propylamine to metastatic cells. Dex-propylamine is a dextran-based biosynthetic polymer designed with free propyl amine groups. This compound was synthesized in Dr. Chu's Lab at Cornell University. We hypothesized that the polymer's cationic properties would result in a high affinity for the negatively charge membranes characteristic of metastatic cancer cells. In order to determine the localization inside the metastatic prostate cancer cell line PC-3, and the normal prostate epithelial cell line RWPE-1, cells were seeded at 100,000 cells/well in a 48-well plate, and treated with 100 g/mL of Dex-propylamine at four different time points: 0.5h, 1h, 2h, and 5h. The cells were incubated in RPMI and 10% fetal bovine serum, at 37°C and 5% carbon dioxide. Image analysis showed that there was a significant uptake of the polymer by approximately 69% percent of PC-3 cells, at 2h and 5h. Furthermore, we determined that Dex-propylamine, was localized in the cytoplasm of these metastatic cells. Remarkably, we were unable to observe a significant uptake of the polymer by the non-metastatic RWPE-1 cells. Our data suggest that Dex-propylamine is target specific to the metastatic cancer cell line, and therefore has the potential to be used as a drug delivery tool.
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The effect of embryonic ethanol exposure on zebrafish development

As an organ system that begins development early in embryogenesis and continues development throughout embryogenesis and postnatally, the nervous system is particularly vulnerable to teratogen exposure. It has been documented that prenatal exposure to ethanol may result in developmental delays and severe cognitive deficits, known collectively as Fetal Alcohol Syndrome or Fetal Alcohol Spectrum Disorders. We are investigating the effects of ethanol exposure by treating zebrafish embryos at different stages of development, and for different periods of time. Preliminary results confirm previous findings of cardiac and morphogenetic

defects as well as new evidence of nervous system defects even in the absence of obvious morphological changes.

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Political Islam in the 21th Century: Towards an Understanding of the Muslim Brotherhood in post-Mubarak Egypt

This paper traces the evolution of the Muslim Brotherhood in an attempt to understand its contemporary socio-political aspirations in post-Mubarak Egypt. In contrast to popular depictions in the media and elsewhere, it is argued that the Brotherhood in the late 1970s and early 1980s deviated from its previously somewhat hostile political approach in favor of an effort aimed at changing the political system from within the existing parliamentary structure. This allowed the Brotherhood to gain access to the tools needed to create a loyal constituency which it broadened by assuming the role of a welfare state and by performing charity work in accordance with Islamic principles. While these actions were in perfect alignment with the quasi-democratic principles outlined in its draft platform in 2007, the Egyptian uprising in 2011 for the first time prompted a more pragmatic approach at the level of policy and legislation. We are currently witnessing a battle fought internally within the Brotherhood leadership with different factions seeking different solutions to the question of how to remain true to basic Islamic values and principles of Sharia while simultaneously promoting a discourse of equality and individual freedom. This question, it is argued, remains largely unresolved, although the newly established Freedom of Justice Party - the product of an effort aimed at shaping policy after public opinion rather than an effort aimed at influencing public opinion directly – represents a partial compromise. This is a stark contrast to the movement's legacy under the former leadership of ideologues such as Hassan al-Banna and Sayyid Qutb although, it is argued, a reflection of a genuine long-term goal of seeking to reconcile Islam and democracy at the level of concrete policies and legislation.

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Transcriptional Repression of the RING Finger/SPRY Domain Containing 1 (Rspry1) gene by Muscle-specific RING Finger 1 (MuRF1)

Skeletal muscle atrophy results from a wide range of conditions, including immobilization, spinal cord damage, aging and inflammation. The muscle-specific RING finger 1 (MuRF1) protein is an E3 Ubiquitin Ligase that is induced under virtually all atrophy conditions and is believed to promote protein degradation; however data presented in this study suggest that

MuRF1 may also regulate the transcriptional activity of other genes that show differential expression in neural damage-induced atrophy (i.e. denervation). A preliminary investigation using microarray technology to monitor changes in gene expression in the muscle of wild-type and MuRF1-null mice following denervation, revealed genes that show altered expression patterns following neural damage-induced atrophy in the absence of MuRF1. The NEFA Interacting Nuclear 30 (Nip30) and RING Finger/SPRY Domain Containing 1 (Rspry1) genes exhibited similar transcriptional induction in response to denervation in normal mice, but altered expression profiles in MuRF1-null mice. Nip30 and Rspry1 are juxtaposed genes that share a 250 base pair regulatory region and are transcribed in opposite directions, suggesting that these genes may share common transcriptional effectors. In this study, the transcriptional regulation of Nip30 and Rspry1 was analyzed using a 500 base pair fragment of the promoter region of each gene. Cells were transfected with Nip30 and Rspry1 reporter constructs and evaluated over several days to determine the promoter activity of each gene in response to ectopic expression of MuRF1. Rspry1 showed suppression in response to MuRF1 but Nip30 showed virtually no change, suggesting that while these genes may share a common regulatory region, the mechanism of control may be different in response to atrophic conditions. Characterizing the transcriptional regulatory role of MuRF1, and the downstream effects on the muscle atrophy signature will advance our understanding of the molecular mechanisms of atrophy, leading to new potential therapeutic targets for the treatment of muscle wasting.

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Turbulence Model Comparison of Flow over a Backward-Facing Step

The flow over a backward facing step channel was simulated employing computational fluid dynamics (CFD) software. Two turbulence models were used in order to compare solutions to experimetnal data found in the literature of flow over a backward facing step. The main components observed were the velocity contours of the two models mainly in the primary recirculation region following the step in order to observe the differences in the reattachment lengths as the flow developed over a period of 1 second. Also, the damping of the turbulence was observed for the two models down-flow of the step by capturing planes perpendicular to the main flow direction and analyzing the velocity magnitudes. The two models compared were the Large Eddy Simulation (LES) Dynamic Smagorinsky and the Improved Delayed Detached Eddy Simulation (IDDES). Results indicated favorable agreement of the two turbulent models with actual experimental results and the same general trends were observed in all three cases. The main recirculation regions were as predicted close to the step with the presence of large vortices that eventually normalized to a certain length as the flow developed with time. Its relative simplicity proves to be powerful as its prevalence in engineering application is extensive yet the nature of this type of flow is not entirely understood. Contrasting turbulent models with experimental data serves to improve numerical schemes in order to obtain more accurate solutions depicting real flow patterns.

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Aches and Pains: The Aversive Consequences of Working with a Burdensome Group Member

Ostracism, being excluded and ignored, lowers basic needs satisfaction and causes social pain (Williams, 2007). When other members display exclusionary cues, the sociometer, an internal belongingness regulator, prompts individuals to feel social pain, defined as negative emotions felt during relational devaluation (Kerr & Levine, 2008). Similar to ostracized individuals feeling social pain when losing group resources, we contend individuals experience social pain when someone tries to take away group resources. Therefore, we hypothesize that as burdensomeness of a group member increases, participants will report greater social pain and urge to ostracize that member. Additionally, the social pain and desire to ostracize will occur regardless of whether or not group performance matters. Participants and a confederate alternated play in a 30-question game we created called Atimia. The task of Atimia is to solve a series of Remote Associates Test (RAT; Bowden & Jung-Beeman, 2003) items; for example, "bee", "comb" and "dew" share the linking word "honey". We designed the game so that participants will be 80% correct. To manipulate burden, we set confederate accuracy to 13%, 47%, or 80%. Prior to Atimia, half of our participants learned that group performance affected the number of clues they would receive to solve a murder mystery. The other half received no stipulation. Although the murder mystery task was nonexistent, it served to show that burdensomeness would affect participants regardless of motivation. Based on the Atimia interaction, participants reported their level of social pain, confederate burdensomeness, and desire to ostracize the burdensome player. We are currently collecting data for this project. We expect to find greater burden leads to greater social pain and that these results exist independent of task motivation. Our findings have implications for how pain affects an individual's interaction with strainful members (e.g., disabled individuals).

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The Synthesis, Purification, and Characterization of K[Co3Ru(CO)12] and K[Co3Fe(CO)12] and Their Potential Applications

The extended crystal structures of K[Co3Ru(CO)12] and K[Co3Fe(CO)12] are potentially useful as catalyst precursors for Fischer-Tropsch and hydroformylation reactions. The reported IR spectrum of K[Co3Ru(CO)12] contains suspicious peaks that are suspected to be impurities. Therefore, the synthesis of K[Co3Ru(CO)12] was modified from the literature procedure to

remove the impurities by taking advantage of solubility differences between the impurities and K[Co3Ru(CO)12] in ether. The modified synthesis of K[Co3Ru(CO)12] was characterized by IR, which demonstrated that the impurity peaks were removed. Single crystal X-ray diffraction was used to determine extended crystal structure of K[Co3Ru(CO)12] and determine if structure matched the known 1D zigzag chain structure of [Na(THF)4][Co3Ru(CO)12]. Due to the probative cost of Ru a second synthesis was carried out with the same general procedure and purification technique where Ru was replaced with Fe, which is significantly more cost effective. An IR spectrum was taken to determine similarities between K[Co3Ru(CO)12] and K[Co3Fe(CO)12].

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An Application of Behavior-Driven Design to Classroom Software

Behavior-Driven Design (BDD) is a newly popular software development methodology which attempts to bridge the gap between the developer and client, defining application features in terms of user interaction as opposed to technical terms and software evolution through communication between the two sides, shaping the software to the specific goals of shareholders. We study the applicability of BDD to a classroom tool by developing Narwhal, a drawing application designed to mimic the combination of Powerpoint slides and whiteboard, and employing junior and senior seminar students at Eckerd College as clients. Through a semester-long case study we view the effects of BDD on the evolution of Narwhal and evaluate its general applicability to the design of classroom tools.

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Protein Expression in Apoptosis and Cell Proliferation

This study provides experiments performed on Caenorhabditis elegans (C. elegans) to study protein expression during apoptosis and proliferation, and in doing so, correlates the effects from such experiments to cancer related mechanisms. Introduction of ultraviolet light (UVL) initiated the apoptotic pathway leading to an increased expression of the tumor suppressor enzyme p53. The gene encoding this protein, cep-1, promotes DNA damage-induced apoptosis. Moreover, induced starvation of the wild type resulted in down-regulation of p53 (via Akt), which slowed nematode growth rate and consequently increased their life span. The Akt knockouts lacked regulatory control over p53 and subsequently suffered a shorter lifespan. The results of the

experiments provided insight on two factors that can affect cell signaling in such a way to initiate either apoptotic, or proliferation pathways.

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Practical Investigation of Security Apps for Smartphones

Smartphones, cellular phones with advanced mobile operating systems that replicate PC capabilities, are one of the world′s fastest growing consumer technologies. In 2011 shipments of smartphones increased more than 60 percent from 2010 to eventually overcome the total number of PC shipments for the first time ever. People use smartphones for a variety of tasks ranging from internet browsing, GPS navigation, and financing to gaming, socializing, and shopping. The amount of data exchanged in order to accomplish these tasks makes smartphones and their users more attractive targets for hackers. As the number of people who use smartphones increases so will the incentive for attackers to break or avoid the latest security measures implemented by the operating system.

This poster discusses the capability of third-party mobile applications to supplement the default system security. Different methods have been developed to provide security including application locks, tracking and recovery systems, device alerts, information back-ups, data encryption and protection, malware scanning, and system monitoring. We will look at a variety of applications targeting smartphone security and analyze the common features that each provides. The applications that will be studied are Lookout Security & Antivirus (premium access), avast! Free Mobile Security, and AVG Mobilation Anti-Virus Free. To narrow down the research we will only focus on the implementation of these applications on the open source Android mobile OS and cover how they improve the smartphone information security goals of confidentiality, integrity, and availability through defense-in-depth.

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Effects of predatory blue crabs on the byssus production in the non-native Asian green mussel Perna viridis in Tampa Bay

Juveniles (10-25 mm) of the Asian green mussel Perna viridis (Bivalvia: Mytilidae) were exposed to chemical cues of either the predatory blue crab (Callinectes sapidus) or conspecifics being eaten by the blue crab. The number of threads produced by each mussel was counted every hour for six hours and further counts were made 16, 24 and 48 h after the onset of the experiment. The number of threads produced did not differ significantly between the blue crab alone and control groups. Exposure to predators feeding on conspecifics led to significantly

higher byssus production. The mean length of a byssus thread did not differ among treatments. Significantly higher number of individuals in the control group shed stalks during the experiment. Results suggest that byssus production is a plastic response which could be induced by exposure to predators feeding on conspecifics.

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The Biofilm Viability and Antibiotic Sensitivity of A Naturally Isolated Tetracycline Resistant E.coli Strain

Over 80% of bacterial infections are caused by bacterial formed biofilms. Through the production of a matrix enclosed polysaccharide coat, a benign bacterium can become more virulent than its planktonic counterpart and sometimes can confer resistance to various antibiotics. Some researchers hypothesize the resistance mechanism could be a joint effort between the structural composition of biofilms and the ability of the organism to acquire an antibiotic resistance gene. Our lab has isolated a tetracycline resistant Escherichia coli strain from an environmental water source. We aim to analyze the biofilm viability and antibiotic sensitivity of this strain compared to a commercially purchased E.coli tetracycline sensitive strain. We tested the ability of both E.coli strains to form biofilms in the presence of various doses of tetracycline maintained over a seven day time period. Biofilm viability was measured according to standard MBIC procedure. Briefly, accumulated biofilms in a microtiter plate were stained with a crystal violet dye and spectrophotometer readings at 490nm were taken of the crystal violet-decolorizer solution from each well. Initial results indicate the TetR E.coli stain could maintain biofilm viability throughout higher tetracycline doses as compared to the TetS E.coli strain. Biofilms were then formed from each strain in the absence of tetracycline. These biofilms were then subjected to various doses of tetracycline maintained over a seven day time period and biofilm viability and resistance of the cells to tetracycline were tested. These results will be presented and will further elucidate the role of biofilm structure and acquired antibiotic resistance in biofilm formation and antibiotic resistance of the biofilms. The precise mechanisms by which biofilms found in nature resist antibiotic treatments can aid in determining how to better treat these diseases.

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Need for Cognition and memory: Can one's natural processing style be influenced by external factors?

The purpose of this experiment was to provide an enhanced understanding of Need for Cognition (NFC) and its influence on one's true and false memories. Prior research (Graham, 2007; Leding, 2011) has found that high-NFC individuals are more prone to creating false memories than their low-NFC counterparts. One possible explanation for this could be that high-NFC people put more cognitive effort into their mental processes, and are processing the items in a more elaborate fashion. To determine whether one's natural processing tendencies, as determined by NFC, can be influenced by external factors, manipulations to levels of processing were added. Participants viewed word lists from the Deese-Roediger-McDermott paradigm (DRM). The DRM contains lists of words that are all semantically associated to one critical nonpresented word, or critical lure. For example, the lists pertaining to the nonpresented critical lure window would contain door, glass, pane, shade, ledge, sill, house, etc. A false memory is created when participants remember viewing the critical lure window although it was never actually presented. Half of the lists were processed shallowly and half were processed deeply. After all the lists were presented, participants completed three successive recall tests. The deep processing condition produced higher rates of false memories for both NFC groups compared to the shallow processing condition. Therefore, the deep processing condition succeeded in raising the processing style of the low-NFC group to a level similar to that of their high-NFC counterparts. In addition, the high-NFC group produced higher rates of accurate memories in both the deep and shallow conditions compared to the low-NFC group. This indicates that high-NFC people not only exhibit enhanced accurate recall for word lists, but are also better able to increase their accurate memories over successive tests.

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Stetson University

Achieving Food Security: Food Aid, Government Policy, and the Ties That Bind

This paper explores why some food aid recipient countries have made progress towards food security, while others have not. To make progress toward food security, a country must invest in agricultural development to increase food production, economic development to ensure access to markets and financial ability to purchase food, and political development to ensure a reduction in conflict, effective national and rural governance, and investment in safety net programs. This paper places these ideas into the context of the food aid debate regarding food aid's potential to contribute to and hinder a country's progress towards food security. Contrary to most literature, food aid is not always unequivocally negative in terms of hindering development. After examining the existing literature on food security, food aid, and development, and the cases of Ethiopia and Malawi, I find that food aid can be effective in promoting long-term food security to the extent that it supports (or fails to hinder) agricultural, political, and economic development. Although it is widely agreed upon that achieving food security requires a multifaceted approach, and that food aid is meant to meet short-term food insecurity and can harm long-term food insecurity, this paper provides examples of how food aid can complement or undermine existing development strategies while examining the contributions of politics, economics, and agriculture to food security.

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Rethinking School Food: Moving from Consumerism to Sustainabiliy

Affluent societies are living in a world that cannot sustain the average person′s life style. Therefore, the education and media need to be strongly reevaluated to spread the correct message of being ecologically friendly rather than exploiting junk food, non-educational programs and the need for materialistic items. To see a transformation of a society, change needs to come from the people, government and the media. Because of this, in order to create a successful plan to create and maintain a sustainable meal plan for school districts across the globe, it is crucial to include the support of major corporations such as the USDA, the involvement of the media and hospitality, and the motivation of the students. An example of a needed change is the cafeteria at Lynn University, a small, private college in Boca Raton, Florida. The food service in this school has positive aspects that should further be encouraged but also has to take into consideration its flaws. For this plan, there are three categories of stakeholders that are examined and serve as the main agents of change: student, school and government. Our poster includes an overview of potential policy solutions that involve all of the three aforementioned categories of stakeholders. These policy solutions focus on what is needed for an environmentally sustainable cafeteria at Lynn University which can serve as a role model for all colleges and universities.

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The Influence of Educational Differences on Marital Satisfaction in Low-Income Couples

While research has provided a link between couple's education level and increased divorce rates, little research has focused on how previous education, specifically education differences and congruence within couples, has affected their pre-intervention relationship satisfaction (Ono, 2009). Therefore, this study explored the influence educational congruence has on marital satisfaction with low-income married couples with children. Using initial intake data from the Marriage and Family Research Institute's (MFRI) OFA Together Project study, I examined the congruence between partner educational levels and relationship satisfaction using the Relationship Assessment Scale (RAS). The OFA Together Project aimed to increase long term marital satisfaction and stability through marriage education classes. The results of this study will shed light on how education level congruence might influence relationship satisfaction.

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Pro-Labor or Pro-Management? Social Dominance Orientation and Thought-Induced Attitude Change

Mere thought is sufficient to change attitudes (Tesser, 1978; Tesser, Martin, & Mendolia, 1995). After thought, individuals with initially favorable or unfavorable attitudes will have even more favorable or unfavorable attitudes respectively. Thought-induced attitude change is mediated by changes in attitude-related beliefs (i.e., how individuals feel depends on what they believe). In this study, we explore the potential moderating effects of individual differences in Social Dominance Orientation (Pratto, Sidanius, Stallworth, & Molle, 1994). Individuals with a strong social dominance orientation favor social order that maintains social inequality; individuals with a weak social dominance orientation favor social order that maintains social equality. In this study, participants are being asked to read statements from a dispute between labor and management. Participants are asked to express their initial attitudes toward labor and toward management, to think about the dispute (i.e., list and classify beliefs), and re-indicate their attitudes after thought. Participants then respond to a 14-item Social Dominance Orientation scale. Data collection is in progress (current sample size = 74). We are predicting that (a) participants who have a strong social dominance orientation will have initially favorable attitudes toward management, and those attitudes and beliefs will be stronger after thought and (b) participants who have a weak social dominance orientation will have initially favorable attitudes toward labor, and those attitudes and beliefs will be stronger after thought. These results are expected to inform both self-generated attitude change theory (i.e., thought does not polarize all individuals′ attitudes) and social dominance theory (i.e., differences in the attitudes of people high and low in social dominance are accentuated by some forms of thinking). These results could also have applications to actual labor-management disputes (e.g., inducing people to adopt perspectives opposite to their own has been found to reduce attitude polarization; Clarkson, Tormala, & Leone, 2011).

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The Syrian Crisis An Opportunity to Strike at Assad through the Execution of a No Fly Zone and Utilization of the International Criminal Court

As the Syrian Revolution of 2011 rages on, the government of Bashar Al-Assad has clung onto power by massacring protestors, civilians, and grossly ill-equipped rebels. This article examines the possibility of a No Fly and No Drive Zone in Syria, coupled with an International Criminal Court indictment of key members of the Assad regime, and critically analyzes the Obama Administration's reaction to this human rights catastrophe. The author examines the positive and negative effects of the proposed No Fly and No Drive Zone, by looking at the ramifications of

United States, North Atlantic Treaty Organization, or United Nations support of the armed civilians who are attempting to topple their government. Specific regards will be paid to the de facto abandonment of a diplomatic solution to the crisis that these military tactics would result in; and if a diplomatic conclusion to the disaster is even possible following Secretary Clinton's assertion on July 12, 2011 that the Assad regime is no longer legitimate. The author concludes that the Obama administration and the international community has not done nearly enough to aid the Syrian freedom fighters, and that the historical precedence of NATO intervention in Iraq, and Libya, dictates that the United States, and the international community should intervene with a UNSC authorized, and NATO enforced No Fly and No Drive Zone along with an ICC indictment of Assad.

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