

6th Scholarship and Creative Arts Day

SCAD Presentations

By Department

Biology Poster Masters Atrium

9:30 AM **Can Color be Used as a Context Cue During Saccadic Adaptation?** **# 145**
 Presenters: Brittany Benjamin, Alisha Martin, Christopher Macomb Mentor: Dr. Aaron Cecala

When the head does not move, rapid movements of the eyes called saccades are used to redirect the line of sight. Saccades are defined by a series of metrical and kinematic (evolution of a movement as a function of time) relationships. For example, the amplitude of a saccade made from one visual target to another is roughly 90% of the distance between the initial fixation point (T0) and the peripheral target (T1). However, this stereotypical relationship between saccade amplitude and initial retinal error ($|T1-T0|$) may be altered, either increased or decreased, by surreptitiously displacing a visual target during an ongoing saccade. This form of saccadic adaptation has been described in both humans and monkeys. We investigated the effects of a contextual cue (target color) on the rate and magnitude of human saccadic adaptation using videography (EyeLink 1000) to measure our subjects' eye position. Our preliminary results indicate that color can be used as a contextual cue. These findings suggest that saccadic adaptation, once thought to involve only achromatic processing in the brainstem and cerebellum, may be influenced by color signals processed in portions of the basal nuclei, thalamus, and cerebral cortex.

9:30 AM **Effects of water quality on catch per unit effort of juvenile lemon sharks, *Negaprion brevirostris* Poey, in the coastal waters of South Caicos, Turks and Caicos Islands, British West Indies** **# 146**

Presenter: Lauren Breza Mentor: Dr. David Bowne

In recent decades sharks have become increasingly threatened due to overfishing, within shark fisheries and through bi-catch, and human development, thus, lemon sharks (*Negaprion brevirostris*) have recently been placed under the protection of NOAA's Secretarial Fisheries Management Plan and the IUCN near-threatened listing. A study was conducted in South Caicos, Turks and Caicos, British West Indies, on the effects of water quality on the catch per unit effort (CPUE) of juvenile lemon sharks. Over the course of 25 days, 47 elasmobranchs were captured using a monofilament gillnet and tagged with T-bar anchor and plastic headed or metal headed dart tags. Dissolved oxygen, salinity and temperature readings were recorded every hour at the beginning and end of the gillnet, as well as at shark capture sites. I found no significant difference between water qualities from the beginning to the end of the net. Dissolved oxygen levels did produce a significant relationship with site CPUE, as well as an overall significant difference between CPUEs calculated for the different locations. The proceeding temperature and salinity, however, were not significantly related to the CPUE of a site. Due to limited time and small sample sizes, further study analysis is suggested to determine definitive relationships between abiotic factors and juvenile lemon sharks.

9:30 AM **Impact of historical milldams on habitat of the bog turtle (*Glyptemys muhlenbergii*), a federally listed species** **# 147**

Presenter: Aleah Miller Mentor: Dr. David Bowne

The bog turtle, *Glyptemys muhlenbergii*, is a federally listed threatened species under the United States Endangered Species Act that currently only inhabits isolated pockets within its historic range. This species occupies shallow, freshwater wetlands and wet meadows dominated by tussock sedges. Like many other species, the bog turtle is impacted by habitat loss and degradation. We argue the major driver of this habitat loss is wetland burial that resulted from the construction and later removal of milldams during the 17th to 19th centuries. We report on the virtually identical overlap of historical bog turtle habitat and historical milldam presence across the Mid-Atlantic United States. We georeferenced 280 historical locations of known bog turtle habitat and compared these locations to those of known milldams. Milldams were of particularly high concentration in the Mid-Atlantic region of the nation, the same region with the greatest concentration of previously documented bog turtle populations. This overlap supports our hypothesis that bog turtle habitat is buried under 18th-19th century millpond sediment. Conservation efforts for the bog turtle are more likely to succeed if they incorporate loss of bog turtle habitat due to the burial of valley-bottoms that this species once inhabited. Our findings suggest new opportunities to restore bog turtle habitat and recover bog turtle populations.

9:30 AM **Response of salamanders to legacy sediment removal at Big Spring Run, Lancaster, Pennsylvania** **# 148**

Presenter: Chelsea Payne Mentor: Dr. David Bowne

Streams in the Piedmont physiographic province of the Mid-Atlantic United States are strongly impacted by legacy sediments deposited as a consequence of European settlement. In a novel wetland restoration effort, legacy sediments were removed from Big Spring Run (BSR), Lancaster County, PA in autumn of 2011. Our study focuses on the impact of the restoration on salamander populations. We surveyed three stream branches (Main, East and West) of BSR in July of 2010 and May/June of 2011 and 2012. Kennel Run, an upstream segment of BSR, was also surveyed in 2011 and 2012. The restoration occurred in the Main and West branches. East branch and Kennel Run served as controls. We captured salamanders using dip nets, litterbags, and kick nets. *Eurycea bislineata* (northern two-lined salamander) was the most common species caught. Litter bags and dip nets yielded the highest detection probabilities for *E. bislineata*. Captures of this species decreased in the restored branches, increased in East branch, and was relatively constant in Kennel Run between May 2011 and May 2012. The total population size of *E. bislineata* decreased in the six months following the restoration. In contrast, *Pseudotriton ruber* (red salamander) was more common after the restoration, having been caught for the first time in the Main branch. These species-specific responses were not surprising given the massive alteration to the ecosystem. We will continue monitoring to determine the long-term impact of legacy sediment removal on salamanders.

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9:30 AM **Generation of an Hsp70/RFP DNA Construct for Creation of Transgenic Hydra** **# 149**
Presenter: Scott Douglas Mentor: Dr. Diane Bridge

Hydra oligactis and Hydra vulgaris represent two closely related species of freshwater invertebrates. However, these two species exhibit markedly different responses to heat shock and have been observed to have different lifespans following sexual reproduction. We are studying heat shock protein 70 (Hsp70) to determine whether it affects hydra lifespan. Hsp70 is involved in folding denatured and nascent proteins as a chaperone protein. The two hydra species have been shown to produce different amounts of Hsp70 mRNA in response to heat shock. Compared to H. vulgaris, H. oligactis produces less Hsp70 mRNA, is less resistant to heat stress, and has a shorter lifespan after sexual reproduction. To determine whether differences in Hsp70 production play a role in differences in hydra lifespan, we are in the process of creating transgenic hydra which will express higher levels of the inducible Hsp70 gene. In progress now is the creation of a DNA construct required to inject into hydra embryos in order to create transgenics. This construct includes the promoter and coding regions of Hsp70, an intergenic region needed for proper protein expression, and the gene for a red fluorescent protein tag to identify transgenic hydra cells.

9:30 AM **Investigation of the rat nonrepeat enhancer and its contribution to species specificity of ribosomal transcription** **# 150**
Presenter: Kevin Bloh Mentor: Dr. Jane Cavender

The non-repeat enhancer (NRE) of the rat ribosomal gene promoter was first identified as a 174 base pair cis element located between nucleotides -2,183 and -2,357 in the rat non-transcribed DNA spacer region (NTS). This 174bp element was further narrowed to a functional 37bp sequence. When discovered, this sequence was thought to be unique to the rat species and to function solely as an enhancer element. However, our laboratory has found that there is a homologous 37 base pair sequence, differing in only a single base pair from the corresponding rat region, present in the mouse genome. In the mouse genome it also maps to the NTS but at nucleotides -30696 to -30730. Regulation of ribosomal transcription and production of functional ribosomes are essential to cell survival. This process is species specific and it is not known if the NRE plays a role in this selectivity. Thus, we have designed a series of in vivo experiments to test the activation efficiency of both the NRE of the mouse and rat species in mouse, rat, and monkey cell lines and determine its role in species specificity. Luciferase reporter plasmids driven by the rat ribosomal promoter with and without the NRE elements were transiently transfected into each cell line. Preliminary data showed a decrease in luciferase production in rat cells when transfected with mouse NRE, as compared to the species-homologous cells. Experiments are currently under way examining the function of the NRE elements in their homologous and non-homologous cell types.

9:30 AM **Correlation Between SV40 T Antigen Transactivation of the Cyclin A and Ribosomal Promoters** **# 151**
Presenter: Kyle Lord Mentor: Dr. Jane Cavender

SV40 T-antigen is an oncoprotein that immortalizes cells in culture. At least three regions of T-antigen impact transformation in various cell systems: the J-domain, pRb binding region, and the p53 binding region. T-antigen has been shown to transactivate the ribosomal DNA (rDNA) promoters, which is hypothesized to occur to sustain the increased proliferation of the transformed cells. The transactivation of rDNA and cyclin A promoters by T-antigen has been shown to be independent of pRb binding suggesting that another activity(s), other than solely driving the cells into S-phase, may be necessary for the activation of the ribosomal promoter. In this study we compared the capabilities of T antigen mutants to transactivate the cyclin A and ribosomal promoters, hypothesizing that increased expression of the cyclin and subsequent binding to its kinase partners would result in phosphorylation of key transcription factors for rDNA. For transcription of ribosomal genes to occur, upstream binding factor (UBF) must be phosphorylated on Ser388; an activity known to be accomplished by either cyclin A, E or both. This study has concentrated on the central portion of T antigen spanning amino acids 396 to 402, which include the p53 binding domain. Preliminary data has shown that transactivation of the ribosomal and cyclin A promoters are J-domain dependent and Rb- and p53-binding independent. Additionally it appears that alteration of amino acid 399 compromised the proteins accumulation or its ability to transactivate both promoters.

9:30 AM **A Retrospective Study on the Effects of Physical Therapy Treatments and Patients' Compliance** **# 152**
Presenter: Andrew Mariani Mentor: Dr. Jane Cavender

Physical Therapists strive for good and effective patient care. However, to be able to provide that care, patients need to attend therapy sessions. It is essential to determine what practices result in poor patient compliance. This study was designed to assess the relationship between therapy techniques and patient persistence. The techniques were separated into two broad categories, manual- and exercise-based therapy. Manual therapies included traction, soft tissue massage, and passive range of motion stretching. This technique involves the therapist physically touching or moving the patient in order to restore pain-free movement. Conversely, exercise-based therapy helps to strengthen muscles, lessen pain, by methods such as cardiovascular and strength conditioning. Patient attendance rates were then calculated and correlated to the therapy method. It was found that patients receiving manual therapy had an attendance rate 10% higher than patients that received exercise-based therapy. It is believed that the one on one time spent with the therapist and the objective measurement obtained through manual therapy lead to a better patient compliance.

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9:30 AM **Nuclear Re-direction of the Cullin7 E3 Ubiquitin Ligase Function by SV40 T Antigen** # 153

Presenter: Sarah Sulon

Mentor: Dr. Jane Cavender

Simian Virus 40 is an oncovirus whose early region codes for transforming protein T-antigen (Tag). This protein potentiates SV40's capability for viral replication and cellular transformation. Tag binds to several host proteins to alter cellular metabolism and to initiate and maintain tumorigenesis. Cullin 7 (Cul7), an E3 ubiquitin ligase, complexes with the N-terminus of Tag and promotes anchorage independence and high-density growth. Though the transformation ramifications of T-antigen's Cul7 binding region has been published, the specific mechanism in which the Cul7/Tag complex promotes immortalization is unknown. The following study was designed to explore the possible nuclear-redirection of Cul7's cytoplasmic function, via Tag as a chaperon, as a means for cellular transformation. Immunofluorescence has localized Cul7 and Tag to the cytoplasm and nucleus respectively, but the low-levels of the Cul7/T-antigen complex cannot be detected by this method. Thus, immunoprecipitation of cytoplasmic and nuclear preparations was employed to resolve the complex's localization. Lysates from spontaneously immortalized Black 6 mouse embryo fibroblasts expressing Tag were treated successively with PAb416 to immunoprecipitate Tag molecules not complexed with Cul7. This strategy was employed since the PAb416 maps to aa residues 94-98 and should effectively reduce the background population of Tag. These cleared lysates were then treated with PAb901 (C-terminal epitope) to precipitate any remaining Tag. Western blot analysis will determine if Tag is complexed to Cul7. If this strategy proves successful, the study will be expanded to assess nuclear-localization deficient and Cul7-binding deficient mutants of Tag, as well as determine the nuclear targets of Cul7.

9:30 AM **The Effect of Corticosterone on the Growth and Immunological Profile of Melanomas in Mice** # 154

Presenter: Melanie Hartman

Mentor: Dr. Jodi Yorty

B16F10 (B16) cells form melanomas when subcutaneously injected into mice. Glucocorticoids are immunosuppressive steroid hormones that have been shown to slow growth of some tumors. The purpose of this study was to determine the effects of the glucocorticoid, corticosterone (CORT), on the growth and immunological profile of B16 tumors in C57BL/6 mice. Initial studies determined whether CORT altered growth of B16 cells in vitro. A concentration of 1×10^{-4} M CORT significantly slowed the proliferation of the cells. Next B16 growth was monitored in vivo. Mice injected with B16 were provided exogenous CORT in varying dosages (150, 50, or 0 $\mu\text{g/mL}$) through their water. Tumor growth was monitored and measured with calipers. Tumors were excised and the immunological profile of the tumor and spleen was studied through flow cytometry. No significant difference in tumor growth was measured in mice treated with exogenous CORT. The 50 μg dose CORT exhibited no effect on immune profile. Conversely, the 150 μg dose CORT markedly changed the immune profile of the spleen and tumor. In the spleen, T cell and cross-presenting dendritic cell numbers were diminished, and the proportion of CD8+ and CD4+ T cell populations was altered. T-cells were present in the tumors of control mice but nearly non-existent in the tumors of the treated mice. There was a general decrease of all immune cells in the tumors of the treated mice. This suggests that tumor growth is independent of immune cell infiltration, as a large change in immune presence had no effect on growth.

9:30 AM **The Effects of Corticosterone on the Cytotoxicity of Tumor Antigen-Specific CD8+ T Cells** # 155

Presenter: Kristi Noecker

Mentor: Dr. Jodi Yorty

Upon binding to their specific peptide epitope presented on the major histocompatibility class I (MHC I) protein on an antigen presenting cell, CD8+ T cells secrete perforins and granzymes that induce apoptosis of their target cell. Thus, CD8+ T cells are important for recognition and killing of virally-infected cells. Previous research demonstrated that corticosterone, an immunosuppressive stress hormone, limits IFN- γ secretion by CD8+ T cells, but does not alter their cytotoxicity. The current research project investigates the mechanism by which the cytotoxic K11 CD8+ T cells are killing their targets in the presence and absence of corticosterone. The K11 T cells are specific for a peptide epitope located within the Simian Virus 40 tumor antigen protein. Cell growth and the production of granzyme B were monitored upon treatment of CD8+ T cells with varying levels of corticosterone. Treatment of the K11 CD8+ T cells with 1×10^{-6} M corticosterone had a variable effect on cell growth. In both control and corticosterone treated cells, levels of granzyme B were qualitatively detected through the use of a Western blot analysis. Future flow cytometry studies will be conducted to quantitatively analyze the number of control, and corticosterone treated K11 CD8+ T cells producing granzyme B.

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9:30 AM **Building a healthier America: How school districts are following the federal nutrition and health promotion guidelines to foster healthy lifestyles in children** # 156

Presenter: Megan Steber

Mentor: Dr. Jodi Yorty

The United States has worked towards increasing health education and status of its citizens over the past few years. Initiatives were recently enacted as an impetus to improve nutrition and health standards. For example, in school systems, the Healthy, Hunger-Free Kids Act of 2010 and Michelle Obama's Let's Move! Initiative were created to provide adequate nutrition, health education, and opportunities for physical activity for children. In January 2012, the Healthy, Hunger-Free Kids Act added new standards to be implemented in schools effective for the 2012-2013 academic year. To discover how schools are incorporating these new standards and health promotion guidelines, the current research project was initiated. Superintendents of 163 school districts in the southeastern and south-central Pennsylvania areas received surveys regarding the nutrition and health promotion standards. 33 surveys were returned; 58% of the returned surveys were suburban school districts, 36% were rural school districts, and 6% were urban school districts. Data analysis showed that almost all of the school districts had implemented the new standards. A subset offer nutrition education, opportunities for physical activity, and gardening programs to promote healthy food options. Excitingly, schools are following the nutrition and health promotion standards and strive to improve children's health and well-being in innovative ways. Future studies could determine how effective nutrition and health promotion programs are at improving health in students. Studies could also determine how students cope physically and emotionally with changes in food regulations and physical activities in school, and how this affects self-image and self-esteem.

9:30 AM **Transfection of a PAC Clone Containing the p53 Gene in the PAC Shuttle Vector pJCPAC-Mam1 into the KG-1 Leukemia Cell Line for Functional Studies** # 157

Presenter: Jessica Manchak

Mentor: Dr. Jonathon Coren

The Coren lab has generated a human genomic library in the P1 Artificial Chromosome (PAC) shuttle vector pJCPAC-Mam2 for functional studies in human cells and in animal models. We previously demonstrated that a p53-containing PAC clone could be transcribed and translated in the p53 null human osteosarcoma Saos-2 cell line. The KG-1 cell line that was obtained from ATCC was generated from an individual with acute myeloid leukemia. This cell line lacks any functional p53 protein due to a five base pair insertion in front of the intron six 5' splice site. This mutation generates a frameshift mutation that produces a truncated nonfunctional tumor suppressor protein. The KG-1 p53 cell line was transfected with a p53-containing PAC clone using a Lipofectamine 2000 procedure. Total RNA was recovered using the RNA Easy kit. A Qiagen One-Step RT-PCR kit will be used to determine if p53 mRNA was produced. I also plan to investigate if the p53 protein was made using Western blotting.

9:30 AM **Construction of a Stable Saos-2 Osteosarcoma Cell Line with a p53-containing PAC Clone to Study Transcription and Translation of this Gene** # 158

Presenters: Neidig Samantha, Mina Abdelshahid, Jessica Manchak

Mentor: Dr. Jonathon Coren

The Coren lab has constructed a 115,000 member human genomic library in the PAC shuttle vector pJCPAC-Mam2. This vector contains the Epstein Barr Virus (EBV) latent origin of replication oriP, which is a multicopy origin. Therefore, transcription and translation of any gene introduced into human cells should be upregulated. We demonstrated that introducing a p53-containing PAC clone into p53 null Saos-2 osteosarcoma cells resulted in transcription and translation of p53 as evidenced by RT-PCR and Western blotting respectively. Since p53 causes Saos-2 cells to undergo apoptosis, we transfected them with a plasmid containing the Bcl-2 gene under the expression of the human cytomegalovirus (CMV) promoter. The cells were then subjected to G418 selection and colonies were amplified into cell lines. We demonstrated that the Bcl-2 gene was randomly incorporated into the genome using PCR with primers that would only amplify the cDNA product. Since the Bcl2 protein binds to p53, overexpression of this protein should prevent p53 from forming a tetramer and causing apoptosis. We then transfected a p53-containing PAC clone into the newly generated cell line and selected for the PAC clone with puromycin and G418. Colonies were expanded into cell lines and genomic DNA and RNA were recovered. We demonstrated that p53 was transcribed using RT-PCR. We plan to investigate p53 mRNA and protein levels compared to the levels produced in HEK 293 cells.

9:30 AM **Development of Targeted Drug Delivery of Nanolipolee-007 for Melanoma Treatment** # 159

Presenter: Ceyda Sablak

Mentor: Dr. Jonathon Coren

Although only 4% of skin cancers are melanoma, it is the most dangerous type of skin cancer, and leading cause of death from skin disease worldwide. Approximately 60,000 new cases of melanoma occur yearly in the US, causing 8,400 deaths. Currently, no drug is available to treat melanoma by simultaneously targeting the deregulated PI3 kinase, MAP kinase, and STAT signaling pathways. Leelamine, a drug derived from the bark of pine trees, was identified as a potential inhibitor of these pathways. In addition, a nanoliposomal-based delivery system has been developed, called Nanolipolee-007, which stably loads 60% of the compound for 1 year at 4°C. Nanolipolee-007 was found to be more specific at killing melanoma cells than normal cells. The nanoparticle was effective at killing melanoma cells as leelamine dissolved in DMSO was 4.5-fold more effective at inhibiting cultured melanoma cell survival than normal cells. Mechanistically, Nanolipolee-007 inhibited Akt3, STAT3, and V600EB-Raf pathway signaling, decreasing cellular proliferation and increasing apoptosis by 600%. Future research is being done to target this nanoparticle to only melanoma cells. This drug delivery system is favored, because it does not damage both cancerous and non-cancerous cells, like most chemotherapeutics do. Nanoparticles may exhibit both passive targeting, via enhanced permeability and retention effect, or active targeting, via targeting ligands or antibodies. Collectively, these studies show preclinical development of a novel natural product in a unique nanoliposomal formulation for the treatment of metastatic melanoma.

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9:30 AM Introduction of a p53-containing PAC clone into the Breast Cancer Cell Line MDA- MB-468 for Functional Studies # 160

Presenter: Laura Wingert

Mentor: Dr. Jonathon Coren

Genomic libraries constructed in BAC and PAC mammalian shuttle vectors can be used for functional studies in human tissue culture cells or in animal models. The Coren lab has constructed a human genomic library consisting of 115,000 members in the PAC shuttle vector pJCPAC-Mam2 vector. Previous studies have demonstrated that a p53-containing PAC clone was successfully transfected into p53 null Saos-2 bone cancer cells using PCR. RT-PCR showed that transcription was occurring, and a Western blot was used to illustrate that the p53 protein was produced. Apoptosis was also evident in a subset of cells. This study's aim is to investigate if the p53-containing PAC clone can elicit the same response in the mutant p53 breast cancer cell line, MDA- MD-468. This cell line has a homozygous single nucleotide polymorphism within exon 7 of the p53 gene, which destroys its DNA binding domain. These cells were transiently lipofected with the p53-containing PAC clone and RNA was obtained using the Qiagen RNeasy Mini Kit. Future experiments will determine if similar results are obtained in the MDA-MB-468 breast cancer cell line as were obtained in the Saos-2 cell line.

Business Paper Presentation H-213

8:00 AM The Missing Piece in the Puzzle: A Case Study in Corporate Communication # 40

Presenter: Trevor Bower

Mentor: Dr. Cristina Ciocirlan

Communication failures in organizations can result in damaging losses, such as high costs, lost productivity, and lost customers. As an organization grows, the addition of more employees and departments adds complexity in communication flows. If this complexity is not managed effectively, misalignments may result between people and goals, or among organizational design components (Cummings and Worley 2010). This paper analyzes a particular set of communication failures, using an in-depth case study of a real company, OGSecure, Inc., which is owned by the larger CleverLabel Corporation (both fictitious names, to preserve confidentiality). Primary methods are employed to collect data, via surveys and interviews with managers and employees. Within the past year, the two companies have experienced communication failures, stemming from inter-departmental conflicts, organizational politics and the lack of alignment of different management levels around a common vision. It is expected to find that the presence of a position specifically created to ensure effective communication would have minimized or even avoided these communication issues. This person would have facilitated interactions among different management levels and searched for misalignments among organizational components. Based on this case analysis, the paper makes the argument that a high-level position should be created in organizations, with the specific responsibility to ensure an effective communication flow within the organization. To distinguish this position from similar extant positions in organizations (e.g., Chief of Staff, internal consultants), the specific knowledge, skills and abilities needed to execute it effectively are addressed in the paper. Practical recommendations for managers are also developed.

8:30 AM Law of the Land: Affordable Care Act and Financial Implications for Medicare # 41

Presenter: Stephen Brill

Mentor: Dr. Sanjay Paul

On March 23, 2010, President Barack Obama signed the Patient Protection and Affordable Care Act (PPACA) into law. The existence of the law is known to many Americans; however, most people do not seem to know the details of the law, particularly the effects of the legislation on the fast growing Medicare program. The current growth rate of growth of the Medicare system is considered unsustainable with the current policies in place. Many estimates place the government's long-term unfunded liabilities (measured over 75 years) to Social Security, Medicare, and Medicaid at nearly \$75 trillion. However, it is estimated by many actuaries, including the Chief Actuary of Medicare, that the PPACA cuts the inflation rate of Medicare growth from 6.8 percent to 5.3 percent, saving trillions of dollars over the course of time. By the year 2019 Medicare savings alone will near \$575.1 billion dollars, according to former Chief Actuary Richard S. Foster. This paper will highlight the key factors that the government uses to measure the cost savings. The presentation will include a timeline of changes between the enactment of Medicare and the Affordable Care Act, and conclude with tangible propositions currently being discussed for future changes to Medicare.

8:45 AM The Effect of Taxes on Economic Growth # 42

Presenter: Julia Hodge

Mentor: Dr. Sanjay Paul

The potential effects of altering tax rates is a topic frequently found at the center of economic policy-making. There are several arguments that are commonly used to support a lowered tax rate. One argument is that by increasing the after-tax wage, labor supply should increase accordingly. Savings, investment and entrepreneurship are also predicted to increase as a result of shrinking tax rates. Clearly these are all positive outcomes for the growth of a country. However, these outcomes are offset by the increased deficit and resulting reduction in national savings. The total effect of tax cuts on economic growth is determined by how much larger the aforementioned positive effects are than the negative effects. This paper draws on the economic models and examine the actual effect of taxes on labor supply, human capital accumulation, savings, investment, and entrepreneurship. The negative effects on economic growth of increasing the budget deficit will also be examined in full. In addition, there will be a discussion of at what cost tax rates would be reduced in the first place – several proposed strategies involve broadening the tax base by reducing or eliminating tax expenditures. However, it is possible that these tax expenditures, which have positive social impacts, lead to more growth than a potential reduction in tax rate. Finally, we will use the Bush tax cuts of 2001 as a case study of lowered tax rates.

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9:00 AM **Building Blocks of a Sustainable Greater Good: University-Developed Social Solutions to International Issues** # 43

Presenter: Jennifer Hughes

Mentor: Dr. Sanjay Paul

Social entrepreneurship is a strategy by which individuals assist in the advancement of solutions to societal issues through innovative business endeavors. Unlike business entrepreneurs striving to maximize revenue and wealth, a social entrepreneur considers both the social benefits and the financial gains from a certain venture. In the aggregate, the international community gains from the economic and social benefits created by social businesses. Universities and other institutions of higher education have high potential to create and enhance social change through social entrepreneurship. This paper proposes a practical social business program within universities, challenging students to integrate their academic knowledge with business acumen, teamwork skills, and cultural immersion abroad. A notable example is provided by Elizabethtown College which funds a student-managed social business aimed at providing solar technology solutions to the Gambian market. Additionally, a percentage of profits generated from a student-managed investment portfolio can be invested into another social business centered on microfinance. Such innovative social enterprises could be designed and developed in a wide variety of universities internationally. Social businesses create promise for the enhancement of education in underdeveloped nations such as those in Sub-Saharan Africa, while shaping students as future global leaders. Moreover, students have the potential to improve the quality of life abroad. Overall, social businesses supported by universities and managed by students reach beyond the traditional boundaries of the university while defining innovative solutions to address global educational challenges.

Called to Lead Program **Paper Presentation** **H-213**

1:15 PM The Pathway to Processing Experiences: Tales of Tamil # 380

Presenter: Becca Anderson

Mentors: The Rev. Tracy Sadd,
Dr. Tamera Humbert

In 21st century America, and arguably in the world, we are so focused on doing that we rarely have time for being—or reflecting on and truly processing our experiences in life, in learning, and in leadership. Research on what managerial leaders actually do suggests that the demands placed on them results in nearly constant doing with very little or no time for reflection or contemplation. After spending five months in India working within a small rural village and then returning to the College, the presenter has realized how difficult it is both to create time and to find a process for intentional reflection that is valuable and worth the time and effort. Drawing upon the educational foundation of David Kolb's work in experiential learning, which requires reflective observation as a necessary part of any true experiential learning situation, the presenter also will draw upon literature in the fields of occupational therapy and leadership studies to propose a multi-step process for reflective learning, and will demonstrate this process through sharing three stories from her time in India, as she depicts a moment of struggle, a moment of clarity, and a moment of connection.

1:45 PM Occupational Justice, World Hunger, and Ethical Leadership # 381

Presenter: Kelly Van Clief

Mentors: The Rev. Tracy Sadd,
Dr. Tamera Humbert

The issue of world hunger is one example of occupational injustice—something that creates a sustained barrier which prohibits a person's ability to exercise the right to engage in occupations that are meaningful to the person and productive for society. Hunger has an impact on millions of individuals every day around the world, and malnutrition, as well as its causes and effects, have been documented by the Food and Agriculture Organization and the World Health Organization. This presentation will explore the ethical dilemmas and ethical conflicts associated with world hunger, and also will address attempts to alleviate problems through community revitalization, many of which have fallen short of relieving hunger and malnutrition. Ultimately, the presenter concludes that hunger is a global issue related to ethical leadership that requires an interdisciplinary approach. The presenter will challenge students from a variety of academic disciplines to consider how ethical leadership in their academic discipline and future careers requires that they participate in this conversation.

2:15 PM Malcolm X: A Case Study in "Radical" Leadership # 382

Presenter: Katie Yelland

Mentor: The Rev. Tracy Sadd

When one tries to classify the leadership of Malcolm X using traditional models or theories of leadership in the scholarly literature, one discovers that Malcolm X's leadership comes closest to the social change leadership model. At the same time, a nuanced and subtle interpretation of the life and leadership of Malcolm X reveals that none of the traditional models or theories are adequate to the task—not even the social change model. This presentation will use a case study of the life and leadership of Malcolm X to propose a new theory of leadership—the theory of "radical" leadership, which analyzes a leaders not only through styles, behaviors, or skills, but also through a leader's passions, life experiences, and spirituality.

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Chemistry and Biochemistry Poster Masters Atrium

9:30 AM Solid State and Solution Studies of Magnesium Coordination Complexes # 161
 Presenter: Kyle Farkas Mentor: Dr. Jeffrey Rood

Alkaline earth metal complexes are attractive as reagents for performing a variety of useful chemical transformations due to characteristics such as low cost and low toxicity. Compared to highly-studied transition metal complexes, there is much to be learned about the structures of coordination complexes containing alkaline earth metals. To fully understand the potential of such complexes as reagents, fundamental studies into their structures are highly important. In this project, a series of magnesium complexes with salicylaldiminato ligands was investigated using inert atmosphere techniques. Homoleptic complexes containing two salicylaldiminato ligands and heteroleptic complexes containing one ligand and one halide were targeted. These complexes were characterized using nuclear magnetic resonance spectroscopy and X-ray diffraction. It has been determined that the complexes are dynamic in solution and have many factors affecting structure and aggregation in the solid state. A summary of the structural results and potential applications as polymerization catalysts will be presented.

9:30 AM Extended Structures of Metal Phosphinates: Towards a New Class of Hybrid Materials # 162
 Presenter: Zachery Schmidt Mentor: Dr. Jeffrey Rood

The area of metal-organic frameworks (MOFs) is of great interest for their many possible applications in diverse fields such as alternative energy, carbon dioxide sequestration, and other areas of separation science. MOFs are constructed by linking together metal ions with organic molecules. To date, most research has focused on carboxylates as organic linkers in such materials. To realize the full potential of this exciting field, alternative organic linker molecules need to be explored. This project focuses on the structures of metal phosphinates in the solid state. To date, several new MOFs constructed with alkaline earth metals have been characterized by X-ray crystallography and nuclear magnetic resonance spectroscopy. This presentation will summarize the structural trends that have been observed for these new materials and detail extensions of the methodology to other metal systems.

9:30 AM Authentication of Questioned Documents Using High-Performance Liquid Chromatography # 163
 Presenters: Mollie Mares, McKenney Morgan Mentor: Dr. Kristi Kneas

The separation and quantitative measurement of ink degradation products by high-performance liquid chromatography (HPLC) is an emerging area of great relevance to forensic investigations of forged and questioned documents. Based on differences in degradation products of an ink, it should be possible to discern between writing that is original to a document and that which has been added later. To date, only controlled investigations of a limited number of inks extracted from hand-drawn, straight lines have been conducted. Little is known about the variations of ink degradation products for genuine written samples and as a function of ink type, paper type, and thickness of ink deposited on the paper. In the current work, methods of ink sampling, extraction, and detection have been developed for the HPLC analysis of handwritten ink samples. The use of hand-written samples in controlled aging studies allows the degradation of blue and black gel inks to be analyzed. Results are reported for black and blue G-2 Pilot 07 gel pen writing samples aged in darkness, room light, and UV light, and the feasibility of the experimental approach for use in both the crime laboratory and the teaching laboratory is assessed.

9:30 AM Development of a Luminescence-Based Lactate Sensor Using "Smart" Hydrogels and Environment-Sensitive Luminophores # 164
 Presenter: Elaina Truax Mentor: Dr. Kristi Kneas

The development of a low cost, highly accurate, and highly selective lactate sensor is of interest particularly because of its potential use by doctors, athletes, and food scientists. Lactate forms in the body due to anaerobic respiration when the body does not receive enough oxygen. This may occur during periods of exercise or as a result of a medical complication such as shock and diabetes mellitus. Reported here is a luminescence-based lactate sensing approach using "smart" hydrogels that swell and contract in response to changing lactate concentrations. The hydrogel is synthesized through a co-polymerization of 3-acrylamidophenylboronic acid (3-AAPB), which reversibly binds lactate, and acrylamide. As the "smart" hydrogel swells with increasing lactate concentration, changes in the luminescence properties of an environment-sensitive luminophore, embedded within the hydrogel, are monitored. Two types of luminophores have been investigated for use in the sensor: the solvatochromic luminophore, dapoxyl sulfonic acid disodium salt, which responds to the polarity of its local environment, and rigidochromic transition metal complexes of ruthenium and osmium, that respond to the rigidity of their local environment. Results are reported for thin- and thick-film sensors, and recommendations for the development of improved luminescence-based lactate sensors are made.

6th Scholarship and Creative Arts Day

SCAD Presentations

By Department

9:30 AM **Synthesis and Characterization of Osmium Complexes for Use in Luminescence-Based, Hydrogel-Supported Sensors** # 165

Presenter: Amy Wagner

Mentor: Dr. Kristi Kneas

Described here are the synthesis and photophysical and photochemical characterization of [Os(bpy)₂sulf-dpp]Cl₂, [Os(phen)₂sulf-dpp]Cl₂, and [Os(dpp)₂sulf-dpp]Cl₂ where bpy is 2,2'-bipyridine, phen is 1,10-phenanthroline, dpp is 4,7-diphenyl-1,10-phenanthroline, and sulf-dpp is sulfonated 4,7-diphenyl-1,10-phenanthroline. This series of osmium complexes is being explored for potential use in luminescence-based, hydrogel-supported sensors designed to measure analytes of clinical and environmental significance. The analyte sensing approach requires an environment-sensitive luminophore embedded within a smart hydrogel that swells in response to the binding of analyte. Upon swelling of the hydrogel, the luminophore experiences a change in local environment which can be detected through changes in luminescence intensity, emission wavelength, or fluorescence anisotropy. Transition metal complexes like those investigated are favorable as luminophores because they are photochemically robust and have long excited state lifetimes and reasonable quantum yields, thus making them easy to measure. Osmium complexes are of particular interest because they exhibit longer wavelength absorptions and emissions, thus allowing inexpensive excitation and minimizing interferences from autofluorescence in clinical samples.

9:30 AM **Chemistry of Germanium-Phosphorus Complexes** # 166

Presenter: Elaina Nellis

Mentor: Dr. Charles Schaeffer

The purpose of this research is to synthesize and characterize a variety of germanium-phosphorus complexes. Recent interest in germanium-phosphorous chemistry has grown because of the demonstrated use of these compounds in electronics, medicine, the computer industry, and in other areas. Thus, understanding the preparation, structure, and behavior of these complexes is critical to their application in these fields. Knowing whether the complexes are either covalent or ionic, and under what conditions they adopt certain structures, will suggest modifications in experimental procedures to lead to more useful properties. For example, knowing when a complex is ionic, is essential in an application resting on conductance. Therefore, we are preparing germanium complexes with substituted phosphine ligands. Our recent work has focused on the use of germanium tetrachloride (GeCl₄) and substituted symmetric diphosphane ligands of type R₂P(CH₂)_nPR₂, n = 1-4. We are characterizing the compounds in solution using ¹H, ¹³C and ³¹P NMR (recording the more challenging nucleus ⁷³Ge is anticipated in the near future). X-ray crystallographic data are also being obtained for detailed structural characterization of several solids.

9:30 AM **Conformations of Alanine** # 167

Presenter: Mingqi Hang

Mentor: Dr. Gary Hoffman

Alanine is an amino acid found in all living creatures as a building block for proteins. In the gas phase, alanine exists in more than one conformation, each with a different abundance. Verifying the conformations of alanine is important for understanding the dynamic of peptide bonds and the structures of protein. In this research, the alanine conformations were studied with different calculation methods. The methods were: Hartree-Fock (HF), second-order Møller-Plesset perturbation theory (MP2), and several versions of density functional theory: B3LYP, B3PW91, PBE, PBE0, TPSS, HCTH, ω -HCTH, M06 and M06-2X. Different numbers of stable configurations were observed in the different calculation methods and the energy ordering differed among the methods. Hydrogen interactions were studied to try to explain the differences in the calculation methods. Relative abundances of the conformations were calculated with statistical mechanics. Infrared spectra are being generated based on these calculations to deduce the most accurate approximation methods to study the conformations of alanine.

9:30 AM **Statistics of Polymer Chains** # 168

Presenter: Khin San

Mentor: Dr. Gary Hoffman

Polymers are random-coil molecules that can exist in a variety of lengths, configurations, and conformations. Various theoretical methods have been proposed for characterizing the statistical behavior of the polymer chain; two examples are the Freely Jointed Chain (FJC) (or random walk) model and the Freely Rotating Chain (FRC) model. For a real polymer chain, Self-Avoiding Walks (SAWs) need to be considered, where the polymer cannot go through itself because no two atoms in a polymer can occupy the same space. The main objective of this research is to develop an accurate description of polymer chain statistics. Using Mathematica, a symbolic mathematics program, code for generating a random polymer chain using the FJC model was written and the statistical polymer chain characteristics of end-to-end distance, radius of gyration, and persistence length were computed. This code generated results that are consistent with the values theoretically predicted for a random chain. Currently, code is being written that incorporates SAW's into the computations. For future work, code will be written for the FRC model and more sophisticated models may be considered if time permits.

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SCAD Presentations

By Department

9:30 AM **Synthesis of Dapoxyl Sulfonic Acid Analogues for Use in Fluorescent Hydrogel Sensors** # 169

Presenter: Dean Hummert

Mentor: Dr. James MacKay

Dapoxyl sulfonic acid (DSA) is a fluorescent organic molecule which has been utilized in many sensing applications which exploit its fluorescence properties. This includes a recent strategy for relative humidity sensing with hydrogels, a hydrophilic polymer network in which DSA was embedded. Attempts to utilize DSA containing hydrogel sensors to detect target molecules in solution, such as lactate, have been complicated by DSA leaching from the hydrogel into solution. This leads to a decrease in emission intensity with repeated sensor uses. To eliminate leaching, a DSA analogue containing a functional group which could be polymerized into the hydrogel was envisioned. The synthesis of the desired DSA analogue requires the formation of the oxazole core of the molecule using a copper catalyzed alkyne/acyl azide cyclization, with $[Tpm^*, ^{Br}Cu(NCMe)]BF_4$ as the catalyst. This study aims to synthesize the necessary 2,5-disubstituted oxazole product for further use in the analogue synthesis. Investigation of counterion effects, such as PF_6^- in place of BF_4^- , and the effect of varying the substituents on the pyrazole subunits of the Tpm^{Br} ligand, are planned.

9:30 AM **A "Green" Approach to Heterocycle Halogenation** # 170

Presenter: Kathryn Olsen

Mentor: Dr. James MacKay

Halogenated heterocycles are of particular interest in pharmaceutical chemistry due to their analgesic, anti-inflammatory, muscle relaxant and anti-bacterial properties. An example of such heterocycles are pyrazoles, which are five-membered heterocyclic rings containing two adjacent nitrogen atoms. Current methods for pyrazole halogenation include the use of N-chlorosuccinimide. However, this reaction is accompanied by negative environmental effects resulting from long-term biodegradation products and toxicity in aquatic environments. This study aims to avoid harmful reagents through the development of a greener approach to heterocycle halogenation. Such a method involves the in-situ generation of electrophilic halogens from the oxidation of NaX using potassium peroxymonosulfate (the active agent of Oxone).

9:30 AM **STUDIES OF INTRAMOLECULAR CYCLIZATION OF ISOCYANATES ACTIVATED BY NUCLEOPHILIC CATALYSTS** # 171

Presenter: Lydia Whipple

Mentor: Dr. James MacKay

Nitrogen heterocycles play a vital role in the health of society. They are found in many medications such as antibiotics like penicillin. The active portion in many antibiotics including penicillin is the β -lactam ring consisting of an amide in a 4-membered ring. Increased bacterial resistance requires expansion of synthetic methods for making β -lactams with different side chain functionalities. This research highlights studies toward an asymmetric intramolecular cyclization between a nucleophilic isocyanate and an electrophilic α,β -unsaturated phenyl ketone to form β -lactams. The desired substrate was successfully synthesized and its reactivity was explored with various solvents and nitrogen nucleophiles. Although the desired β -lactam has not been obtained, several other products have been isolated and identified. Catalysis with DMAP in acetonitrile yielded a urea with two pyrrolidine rings. Acetylacetophenone was isolated from several reactions with basic conditions. When alcohols were added to the isocyanate with DMAP in acetonitrile carbamates were isolated. Further studies will examine other nucleophiles and possibly alternate substrates.

Communications Paper Presentation BLR (Steinman)

11:00 AM **Tweet Your Dharma: The Dalai Lama's Use of Social Media in Persevering and Promoting Tibetan Culture** # 240

Presenter: Elizabeth Brennan

Mentor: Dr. Tamara Gillis

The past decade has been defined by Web 2.0 which allows for the sharing of global information, global participation and collaboration, and, most notably, user created content. This shift in the way we now use the internet has led to the birth and growth of social media. Facebook, Twitter, and YouTube are the most popular social media with millions of users, some quite famous, which has affected who uses their service and for what purpose. The 14th Dalai Lama, the religious and long standing political leader of Tibet, is among the many renowned celebrities to use social media, but his cause is much different and his background very curious. As the highest ranking monk of Tibetan Buddhism, the Dalai Lama is to uphold the sacred belief of impermanence, yet his role as Tibet's figure head is to raise awareness and gather support on the Tibet struggle. This paper will explain how the Dalai Lama has married these two roles through the use of social media, specifically his Facebook page, Twitter account and YouTube account and how he has captured a global audience.

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SCAD Presentations

By Department

11:15 AM **Effective Communication Strategies for Small Businesses: Examining Strategic Communication Plan Models and Templates** # 241

Presenter: Alexis Morris

Mentor: Dr. Tamara Gillis

Small businesses are a vital part of the U.S. economy, especially in rural areas, such as Elizabethtown. However, with their limited personnel and budgets, communication efforts within that business may fall by the wayside, in effect hindering the potential growth of the business. In order to successfully utilize communication resources, larger organizations have long followed a strategic process in the drafting and implementation of communication plans. While there is great potential in the utilization of strategic communication plans, small businesses often do not have the budget or knowledge for putting these strategies into action. Free information about creating communication plans is abundant on the Internet; however, many templates for plans are not completely applicable for small business. This research takes into account the importance for small businesses to use specific communication strategies. Specifically, this research will answer the question do existing communication plan models and templates serve the communication needs of small businesses?

The data from a survey of small business communication planning practices will be analyzed to see what trends are common in small business communication and what areas are lacking. The data will also be compared to current templates to see how strategic communication plan templates apply to the needs of small businesses.

Education **Paper Presentation** **H-107**

8:00 AM STEM Community Partnership # 10

Presenters: Alicia Klepper, Melissa Gettys

Mentor: Dr. Kathleen Blouch

The NSTA Student Chapter and Science Education Methods class sponsor an after-school club at the Elizabethtown Area Public Library for children in the community in fourth through eighth grades. The purpose of the Science Explorer's Club is to engage students in hands-on science, technology, engineering, and mathematics learning experiences through the technological design process. Having been involved with the library for four semesters, presenters will explain the successes and challenges associated with measuring student learning both for the children and the Elizabethtown College's pre-service Methods students. The three areas of discussion include student understanding of the technological design process, community partnerships, and the parental reactions to this type of programming. Additional research is needed on the community impact of this service learning partnership.

Education **Poster** **H-110**

8:00 AM Teaching Strategies Promoting Attention for Students with ADHD # 15

Presenter: Rachel Goss

Mentor: Dr. Amy Thomason

Attention deficit/hyperactivity disorder (ADHD) is a condition characterized by attention difficulties, hyperactivity, and impulsivity. According to US Centers for Disease Control and Prevention, ADHD prevalence rates in U.S. school-aged children have been increasing in recent years. As of 2009, as many as 5 million children had an ADHD diagnosis. ADHD is not included as a category under the Individuals with Disabilities Education Act (IDEA), which qualifies students for special education services. Thus, students with ADHD often remain in the general education classroom without additional supports. General educators must learn to use research-based strategies that will assist these students in focusing during instruction. This presentation summarizes strategies for general educators to use with students with ADHD including teaching self-regulation for attention and the use of physical activity such as yoga and dance.

8:00 AM The Effects of High-Stakes Testing on Elementary Curriculum and Instruction # 16

Presenter: Rebecca Richardson

Mentor: Dr. Amy Thomason

Since the advent of the No Child Left Behind Act (NCLB) in 2001, of which the primary goal is to address the growing achievement gap between low and high income schools, high-stakes and standardized testing have become a wide spread reality for every school, teacher, and student in America. As a result, the effects standardized testing has on schools, in classroom and on achievement has been a hotly debated topic within the education community. Current research indicates that the impact of high-stakes testing on school curriculum, instruction, and teacher morale is immense with varying opinions from teachers across the country. The purpose of this study is to analyze the perspective of teachers on the impact of standardized testing on instructional practices in the public elementary school classroom.

8:00 AM An Assessment of Interactive Lessons Utilizing Classroom Ipad # 17

Presenter: Carly Shrader

Mentor: Dr. Amy Thomason

In recent years, technological tools have made it possible for teachers to illustrate interactive instruction in their classrooms. For example, the Light Link app created for the iPad is a promising tool for mathematics instruction. For this study, I will implement and assess an interactive lesson using the Light Link app. I will teach two lessons, one utilizing the Ipad and one traditionally taught without Ipad and use a post test assessment to compare scores between the two classes.

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SCAD Presentations

By Department

8:00 AM **The Effect of Assessment on Artistic Curriculum in Special Education** **# 18**
 Presenter: Traci Tempone Mentor: Dr. Amy Thomason

Art education is often seen as a “filler” subject, and is especially limited within special education curriculums. In the special education classroom educators use many different types of assessment to monitor the progress of their students. Different types of assessments provide valuable information for specific skills and subjects. Artistic education incorporated within the curriculum is a channel for self-expression, means of communication, and supports transitional life goals; which are central to a successful special education program. This presentation discusses the significance of art education in the special education curriculum, evaluated by varying means of assessment.

Education	Paper Presentation	H-110
Education	Panel of Presentations	H-110

9:30 AM **Responding to Diverse Student Cultural Identities through Culturally-Responsive Teaching Practices** **# 105**
 Presenter: Katie Niznansky Mentor: Dr. Amy Thomason
 Moderator: Dr. Amy Thomason

Ethnic and racial diversity have increased greatly in American schools in recent history, and continue to increase today. Estimates suggest that forty-seven percent of students will represent minority ethnicities by year 2020 (McDevitt & Ormrod, 2010). In addition to ethnic and racial diversity, socioeconomic diversity also impacts students' lives as they progress through school. During their school years, students create a multifaceted cultural identity as they search for a sense of belonging to a variety of different groups. As the number of students identifying with diverse racial, cultural, and socioeconomic groups continues to grow, schools are beginning to respond through multicultural education practices. Culturally-responsive teaching methods such as raising awareness of cultural similarities and differences are also recommended to help students develop a healthy sense of self (Percival & Black, 2000). This presentation discusses several aspects of identity students explore during their years in school, explores various facets of multicultural education and culturally-responsive teaching, and reports on a qualitative research study that investigated teachers' perceptions of culturally responsive teaching in their own classrooms.

10:00 AM **Education Across Borders: Afghanistan and the United States** **# 106**
 Presenter: Christine Nagle Mentor: Dr. Rachel Finley-Bowman
 Moderator: Dr. Rachel Finley-Bowman

As a result of the decades of warfare and the lack of educational opportunities, the people Afghanistan have continued to suffer. It is the hope of the author that with an increased understanding of the cultural values and belief systems of both the Afghan and American societies, that a solution for peace can begin to develop in the war torn country. This study will specifically focus on how cultural biases have affected nation-building in terms of the educational infrastructure in Afghanistan. In an attempt to equip individuals with the tools necessary for arriving at conclusions without the use of violence, the author advocates for the use of peace education as a means of promoting tolerance and harmony amongst groups. This research will provide background on the current situation in Afghanistan, peace education in its existing form, under what conditions culturally sensitive peace education has the potential to succeed in Afghanistan, and how the cultural biases of the United States impacts the progress for peace. Overall, this research seeks to provide a realistic perspective of the challenges and opportunities presented for peace education in a turbulent world.

11:00 AM **Not Your Grandfather's Shakespeare! Using Graphic Novels to Differentiate Instruction** **# 210**
 Presenter: Megan McCormack Mentor: Dr. Susan Pitcher
 Moderator: Dr. Susan Pitcher

Not Your Grandfather's Shakespeare! Using Graphic Novels to Differentiate Instruction National statistics report that twenty-five percent of eighth grade students have difficulty reading and understanding grade-level material and are performing below the basic level of proficiency. These struggling readers must be given classroom materials which are accessible and understandable while still serving the needs of the curriculum. Classic literature is often difficult for students to read because of the unfamiliar language as well settings and situations that are bound by the time in which the author was writing. Some educators suggest using graphic novels as a means to scaffold readers as they transition into different forms of literature. One publisher, Classical Comics, offers classic works in three different readability levels in the graphic novel format. This study used a comparative analysis to determine if the use of graphic novels of different readability levels is a viable resource to use to scaffold comprehension instruction in the middle grades. The “National Common Core Standards” for eighth grade and current research on adolescent comprehension instruction provided the framework for this analysis. The results of this study will show that rich comprehension instruction for students of varying abilities can be accomplished through the use of multi-leveled graphic novels.

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SCAD Presentations

By Department

11:30 AM **Everybody In! An Integrated Curriculum**

211

Presenter: Brian Booker

Mentor: Dr. Rachel Finley-Bowman
Moderator: Dr. Rachel Finley-Bowman

With today's school lessons being based solely upon standards, lessons have become predictable and less enjoyable, making learning difficult for some students. An integrated curriculum is the key to make daily lessons more relevant and vibrant. The concept of an integrated curriculum has been prevalent in American public schools for decades, but it is not widely utilized in elementary and secondary education. The interdisciplinary approach to education is a departure from the traditional subject-centered schools. The potential exists for Social Studies, Science, Mathematics, the Fine and Performing Arts, and Literary Arts educators to intertwine concept areas and provide students with an integrated learning experience. This study is designed to discover the effectiveness of an integrated curriculum model using Daniel L. Stufflebeam's CIPP Model of evaluation. The CIPP Model: context evaluation, input evaluation, process evaluation, and product evaluation - is designed to provide formative and summative evaluations on institutions and projects. Six different curriculums, three integrated and three standards-based, will be evaluated using the CIPP Model to assess their effectiveness.

12:00 PM **Differentiating Instruction for Students with ADD/ADHD Tendencies**

209

Presenter: Lindsay Palm

Mentor: Dr. Kathleen Blouch

I will be engaging in an action research project during my student teaching placement in order to understand and evaluate the best ways to differentiate instruction in a classroom to help students with ADD/ADHD tendencies. From careful observations, students in my current classroom, between the age of five and seven, struggle with ADD/ADHD tendencies. These tendencies distract students from optimum performance during class time. Distractions are caused by a variety of internal and external influences. These influences will be studied extensively to understand how to build an appropriate approach to this study. Students with ADD/ADHD have difficulties with impulsivity, attention, hyperactivity, emotional stability, or a combination of all elements. The goal of this project is to examine and implement best practices of teaching in order to help ADD/ADHD learners remain engaged, focused, and on task through tested methods achieved from advanced research, practice, and evaluation. Research will be completed in a multiple step approach. I will use a wide variety of educational resources that will provide best teaching methods and practices to enhance student performance in the classroom. Practices learned from research will be used on a daily basis and will be evaluated using multiple sources. By engaging in this action research project, I hope to gain meaningful experience while continuing personal growth and learning. This action research project will be conducted, most importantly, in the hopes of giving all students a chance to learn in an environment that is supportive to all needs.

1:15 PM **Educational Leaders and Positive School Climates**

330

Presenter: Alyson Thorp

Mentor: Dr. Shannon Haley-Mize
Moderator: Dr. Shannon Haley-Mize

The most important outcome of creating a positive school climate is improvement in student academic performance. A positive school climate unites the faculty and the students within a safe and empowering learning environment. Multiple factors, such as parent/guardian involvement, family's socio-economic level, school diversity, available resources, and student-to-teacher ratio, all contribute to an engaging school atmosphere. The central factor in establishing a positive school climate is the principal. "Strong leadership is the heart of all effective organizations, be they private, public, or non-profit" (Hale & Moorman, 2003, p. 7). Currently, there is a need to redesign principal preparation programs. Many researchers have suggested that principal preparation programs are "out of touch with the realities of what it takes to run today's schools" (Hale & Moorman, 2003, p. 5). There is a push to include a more extensive mentoring and clinical work experience in principal certification programs. However, few studies have investigated whether incorporating more fieldwork and mentoring helps principals to foster and maintain a positive school atmosphere. Therefore, the purpose of this study was to determine what current principals believe to be essential components of a principal preparation program to help novice principals facilitate a positive school climate. This qualitative study included input from four principals in kindergarten to twelfth grade public and private central Pennsylvania schools. The major findings focus upon the benefits of field experience, importance of mentors, adjustments to make to the courses, and individual action to lead.

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SCAD Presentations

By Department

1:45 PM **Using Touch Technologies for Students with Special Needs** **# 331**
Presenter: Emily Whiteside Mentor: Dr. Shannon Haley-Mize
Moderator: Dr. Shannon Haley-Mize

Assistive technologies have been used for the past few decades to support individuals with special needs in many different ways. These technologies have ranged from low tech such as graphic organizers and pencil grips and high tech such as adapted keyboards and screen readers. More recently, sophisticated touch technologies have been integrated into classrooms at a rapid rate because of their popularity, flexibility, affordability, and portability. Among the most popular touch devices are the iPod touch, HP TouchSmart computer, iPhone, and the varying brands of tablet computers. The technology is an intriguing tool for students because of the capability to directly interact with material. More particularly, these devices have been attractive options for educators who are digital natives and have been raised with multiple forms of technology. These educators have created a grassroots movement for more information about the uses of this technology at a faster pace. Touch technologies introduce a new way for students to receive the required services they need, while also keeping them "plugged in" with their technological generation. The focus of this presentation includes the multiple ways that touch technologies can be incorporated in the range of settings that children with special needs are served and uses qualitative data to examine the effectiveness of the touch technology with two students with learning differences.

2:15 PM **The Risk of Rewards** **# 332**
Presenter: Nicolle Maioriello Mentor: Dr. Amy Thomason
Moderator: Dr. Amy Thomason

Rewards and punishments have been utilized throughout classrooms in the United States since colonial times (Johns & McNaughton, 1990). What originated as the use of corporal punishment and verbal praises slowly evolved into the theory of Behaviorism, and finally today's overuse of extrinsic rewards. Are students truly cognitively engaged when all many students seek is the star, sticker, or certificate at the end of the day? Now, with a rise in student apathy and senses of entitlement, we are beginning to question these methods and their effects on our students (Caram & David, 2005). As students progress through secondary grades, how many will still be expecting rewards, and what will result when they do not receive them? This presentation explores the debates surrounding these Behavioristic approaches to rewards and punishments and the impacts on students. Results will be discussed from a research experiment that examined the ways in which the use of rewards in elementary classrooms has affected students' motivation as they enter middle school.

Engineering **Paper Presentation** **H-214**
8:00 AM **Brain-Wave Control of Assistive Robotics** **# 45**
Presenters: Chris Janssen, James Kelly Mentor: Dr. Joseph Wunderlich

Rehab robotics is a new and developing field in assistive robotics. Neural control of robotic prosthetics is being researched for both injury rehabilitation and prosthetic limb development. Our project is focusing on using brain waves to control electrical and mechanical systems. Using EEG to record brain waves, we search for repeatable signals to map to different human motor skills, and control of devices. This methodology can be used to create systems to perform specific commands, and could eventually lead to the development of prosthetic replacement limbs. Neural control of certain devices to assist those with limited motor control is being investigated. Initial research includes looking for a simple repeatable pulse to toggle a switch, which could be used to turn a light on or off. We then attempt to create a more complex control system with multiple commands, such as what might be used to control a TV remote. Future research could extend system complexity to the point that it might be possible to control an artificial limb naturally using brain-waves.

Engineering **Poster** **Masters Atrium**
8:00 AM **Lab Design Projects in Electronics Advanced Course** **# 65**
Presenters: Dimitry Albury, Sajid Amir, Nathan Caudill, Kyle Gable, Alexander Horn, Christopher Janssen, James Kelly Mentor: Dr. Ilan Grave

Engineering students in the "Electronics" course complete experimental circuit design team projects. The two students in each group pick an advanced circuit (beyond the material covered during the course,) analyze and simulate it, and design and perform an experiment to measure, extract and display the important features and possible applications of the chosen circuit. Among the selected circuits (1) the current mirror for integrated circuits, (2) the bipolar transistors Darlington pair configuration, (3) a cascode amplifier, and (4) a class AB output stage with diode biasing. The poster(s) will present a summary of these works.

8:00 AM **Engineering Community Based Design Projects** **# 66**
Presenters: Tyler Athey, David Boretti, Eric Borkowicz, James Cohen, Dustin Cramer, Nathaniel Flickinger, Mathew Frey Mentors: Dr. Kurt DeGoede, Dr. Ilan Grave

Second year engineering students complete community based engineering design projects. This year the students have developed (1) a table top garden/planting box for use in pre-K classrooms and (2) a button activated sensory device for pediatric therapy applications, and served as consulting engineers on projects (3) to divert surface water and prevent reoccurring driveway damage (4) to design a security system for a historical site, and (5) integration of sustainable energy technologies into the design of a new press box for the Etown soccer stadium. The presentation will feature highlights from this work.

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SCAD Presentations

By Department

8:00 AM Development of a New Social Business and Appropriate Technology in West Africa # 67

Presenters: Jillian Casey, Jennifer Hughes, Eleanor McCarthy, Joshua Rowlands, Emily Vogel, Julia Ward, Nicholas Young Mentor: Dr. Kurt DeGoede

Our multidisciplinary team (engineering, international business, and political science) is collaborating to develop an affordable Nokia phone charger for the West African country of The Gambia. Cell phones play a vital role in helping rural villagers access a wider market for their crops and strengthen their ability to negotiate a fair price for their goods. In parallel to developing a physical system, we have also developed a sustainable social business model that will run on its own without charitable donations. In this business model units are sold at a locally affordable price and workers are paid a fair wage, but no profit is generated. In January, our team traveled to West Africa to collaborate with physics students and faculty at the University of The Gambia and other Gambian officials. Over the last year, our research and firsthand experience, allowed us to make significant advances in the development of the product and social business. We look forward to a business launch in the next 6-18 months.

8:00 AM Apple Chunkin': Engineering Design Competition # 68

Presenter: Sara Atwood Mentor: Dr. Sara Atwood

In Middle Age warfare, the trebuchet was a common siege machine found on the battlefield. The basic trebuchet design utilizes a counterweight or tension to rotate an arm about an axis, in order to launch a projectile with distance and accuracy. The trebuchet revolutionized warfare for hundreds of years, and was used successfully in combat until well after the introduction of gunpowder. The objective of this Introduction to Engineering II project is to design and construct a mechanically powered trebuchet or catapult device to launch apples in a competitive setting. Teams are competing to determine a winning design that launches apples the furthest. The groups incorporate modern engineering design concepts, materials, and tools with traditional medieval techniques to maximize the performance of the launching mechanisms. This poster will present the design process and competing device types, while the launch will take place during the lunch break in the track infield.

8:00 AM Wind Chime Table for Music Therapy # 69

Presenters: Deborah Bartyczak, Nathan Caudill, Melissa Hessenauer Mentor: Dr. Sara Atwood

It is well known that music is a good way to facilitate healing and development. When combined with physical therapy, music can allow patients to heal and develop more quickly in a process known as music therapy. Music therapy encourages proper motor control through musical tones and beats, which often accompany repetitive movements. Our portable wind chime table is designed to promote proper hand and arm motor control using wind chimes in guided tracks in the table surface.

8:00 AM Modular Instrument Support for Music Therapy # 70

Presenters: Kyle Gable, Shwe Hein, Shane Weller, Kyle Wilt Mentor: Dr. Sara Atwood

It is well known that music is a good way to facilitate healing and development. When used in conjunction with physical therapy, music therapy allows patients to heal and develop faster. Music therapy encourages proper motor control through musical tones and beats that accompany repetitive movements. The objective of our project is to better enable developmentally or physically disabled patients to play instruments that aid in their healing or therapy process. Specifically, we have designed a modular structure to hold instruments in place during various music therapy exercises such as those to increase range of motion.

8:00 AM Automotive Integrated Computer System # 71

Presenters: Dimitri Albury, Alexander Horn Mentor: Dr. Tomás Estrada

The goal of the Automotive Integrated Computer System project is to integrate a fully- functional, Mini-ITX scale computer into an automobile with the purpose demonstrating the expandability opportunities of having a computer in an automotive environment, and reverse-engineering an automobile's CAN-BUS (Controller Area Network) system. The project will also demonstrate computer integration into the CAN-BUS network by having the capability of sending messages through it to a visual display. The project will demonstrate the engineering design process, problem solving skills, hands-on fabrication work, technical knowledge pertaining to electrical and computer components, and computer programming knowledge.

8:00 AM Thermoacoustic Refrigerator # 72

Presenter: Patrick Dixon Mentor: Dr. Tomás Estrada

Thermoacoustics is about the interaction between the fields of thermodynamics and acoustics. Thermoacoustics is a new field of study in engineering. Few devices based on this principle have been made; most are for research purposes. With the world becoming more environmentally conscious, there is a strong demand for natural and renewable energies one application being cooling systems. One answer to these demands is thermoacoustic energy conversion which uses an inert gas like helium, argon or even air as working gas. Thermoacoustics was first observed when heated glass tubes would act like a resonator tube and produce sound. Recently this process has been reversed to produce a temperature change from standing waves. The purpose of this project is to build a thermoacoustic refrigerator or heat pump that will produce a temperature change from a standing wave source.

6th Scholarship and Creative Arts Day

SCAD Presentations

By Department

8:00 AM Reduced Effort Industrial Workstation Crane

73

Presenters: Nicholas Seaman, Bradley Risser

Mentor: Dr. Tomás Estrada

We are developing a crane system to efficiently move heavy objects within an industrial workstation with as little force applied by the user as possible. Our design will utilize cables instead of the conventional overhead beams and tracks. The objective of the cables is to reduce the force required for starting and stopping motion from that required by large beams. This will be accomplished by using a control system to manage the tensions of the cables based on the input of the lengths of the cables. This will be valuable to many industrial workshops that utilize these crane systems. Because less force will be required for moving heavy objects, our crane system will be able to increase production speed and precision.

Engineering Panel of Presentations Gible Auditorium

9:30 AM High-end Phoenix Contact Technologies for International Green Initiatives

115

Presenter: James Kelly

Mentors: Dr. Joseph Wunderlich, Dr. Tomás Estrada
Moderator: Joseph Wunderlich, Tomás Estrada

Phoenix Contact is a Multibillion Dollar, 12,000-employee electronics company with US headquarters 15 from Elizabethtown College. A very close relationship between this company and Elizabethtown College has existed for ten years. This talk will discuss the use of Phoenix Contact high-end technologies, including a summer externship by the speaker, for use in sustainability applications throughout the world.

9:40 AM Reflections from 16 Months of Interdisciplinary/Multicultural Collaboration on a West African Social Business Start-Up

116

Presenters: Jillian Casey, Jennifer Hughes, Eleanor McCarthy, Joshua Rowlands, Emily Vogel, Julia Ward, Nicholas Young

Mentor: Dr. Kurt DeGoede
Moderator: Joseph Wunderlich, Tomás Estrada

We are a multidisciplinary team (engineering, international business, and political science) collaborating to develop an affordable (<\$10) solar mobile phone charger for the West African country The Gambia. In this session we will offer reflections on more than 1 year working on this project including the challenges of (1) multicultural and multidisciplinary collaboration, (2) designing for extreme affordability, (3) structuring a not-for-profit social business in a culture and legal environment unfamiliar with the concept, and (4) how work on this project and time spent in West Africa has change our perspective professionally and personally.

10:00 AM Next Steps in Continuing Work Toward West African Social Business Start-Ups – New Product Development

117

Presenters: Anthony Fraccica, Joshua Frey, Courtney Warlick

Mentor: Dr. Kurt DeGoede
Moderator: Joseph Wunderlich, Tomás Estrada

We are building on the work of the 2012-2013 interdisciplinary team developing appropriate technologies for developing countries. In particular we are developing affordable solutions to the problem of access to electrical power. The 2012-13 team is completing technical design and the development of a business plan for a social business to assemble, distribute and sell low cost (<\$10) solar mobile phone chargers. In particular this product is being designed for the West African country The Gambia, where typical individuals in rural villages live on less than \$1.25/day. This semester we are developing specifications to extend the product-line of the social business, continuing the model of economic and environmental sustainability.

10:15 AM Family EcoRise

118

Presenter: Vaclav Hasik

Mentor: Dr. Joseph Wunderlich
Moderator: Joseph Wunderlich, Tomás Estrada

"Family EcoRise" is a sustainable urban housing concept. This project was part of our Green Architectural Engineering course (EGR343), which teaches traditional green engineering methods for buildings and construction. The goal of this project was to use these methods for the design of our own residential building. This particular concept is trying to use the traditional U.S. row-home features while creating more sustainable way of living through smart community integration, creation of natural habitats, use of local and renewable resources, and use of efficient materials and utilities. The design process included initial brainstorming and sketches, followed by the use of a computer modeling system (Revit) that allowed for 3D perspectives, floor plans, elevations, and section views. Important part of the project was attention to local building codes, zoning ordinances, and implementation of LEED (Leadership in Energy and Environmental Design) green building guidelines. Being environmentally conscious is important for the future of our planet. The human population is rising and so is the demand for resources. In the U.S., 40% of these resources go into our buildings, and that is why we need to rethink the way we build and develop our infrastructure.

6th Scholarship and Creative Arts Day

SCAD Presentations

By Department

10:30 AM Proposed Design to Replace a New Jersey Vacation Home Destroyed by Hurricane Sandy # 119

Presenter: Emily Vogel

Mentor: Dr. Joseph Wunderlich
Moderator: Joseph Wunderlich,
Tomás Estrada

Hurricane Sandy seriously devastated the East Coast and left many homes completely destroyed. To replace these homes, a tragedy can be turned into a great opportunity to introduce LEED and sustainable design. This particular project focuses on a home in the middle of Long Beach Island, NJ. This project was part of the Green Architectural Engineering course (EGR343), which teaches traditional green engineering methods for buildings and construction. The goal of this project was to use these methods for the design of our own residential building. This design focuses on optimizing the positive aspects of the site, while mitigating the less appealing features. The design also features many ways of meeting the LEED (Leadership in Energy and Environmental Design) standards by using energy efficient products, building with local resources, and orienting the building in a way to enhance natural light. The design process included initial brainstorming and sketches, followed by the use of a computer modeling system (Revit) that allowed for 3D perspectives, floor plans, elevations, and section views. Sustainability is crucial to the future of the planet. Buildings are the biggest consumers of energy, both in construction and operation. This makes it important to design buildings to be constructed in not wasteful ways and to operate on minimal energy.

11:00 AM SWOT Analysis of a Sustainable Entrepreneurial Ecosystem in Costa Rica # 230

Presenters: Kyle McNulty, Derek Zrncic

Mentors: Dr. Tomás Estrada,
Dr. Petru Sandu
Moderator: Joseph Wunderlich,
Tomás Estrada

The presentation will showcase our findings thus far and what we plan to accomplish in the upcoming year. During our research we have examined the internal and external environment of Costa Rica in regards to Entrepreneurship. A technique used to aid in interpreting our findings was the use of a SWOT analysis; applying the analysis, we turned our observations into supportive ideas that could later be used to support the concentration of the paper. The key focus of the analysis is to observe the entrepreneurship ecosystem that presently exists in Costa Rica and deciphered the future possibility of sustaining and enhancing the rich entrepreneurial environment. Internally, we examined strengths and weakness and externally we examined opportunities and threats of Costa Rica in relation to the entrepreneurship ecosystem. The presentation will also discuss the scope and limitations of our research while providing information about the culture of Costa Rica.

11:15 AM Computer-network Control of Hydroponic Gardens # 231

Presenters: Sean Flanagan, Andrew Khela

Mentors: Dr. Joseph
Wunderlich, Dr. Tomás Estrada
Moderator: Joseph Wunderlich,
Tomás Estrada

This talk will discuss the evolution of hydroponic gardening technologies over two courses, EGR/CS434 Green Robotics, Automation, and Machine Intelligence, and EGR/CS Digital Design & Interfacing, plus an internship with Phoenix Contact, and potential applications in future EGR410 Control Theory. This initiative began with a small tented garden as a course project, and has grown into a collection of gardens grown by EGR/CS333 students using a network of Phoenix Contact Programmable Logic Controllers communicating over ModBus, a packetized computer-networking protocol for industrial control.

11:30 AM Analyzing the Hydrological Impacts of a Proposed Sports/Recreation/Fitness Center at Elizabethtown College # 232

Presenter: EGR 265 Representative

Mentor: Dr. Brenda L Daily
Moderator: Joseph Wunderlich,
Tomás Estrada

Current efforts are underway to determine the feasibility of adding a Sports/Fitness/Wellness center to Elizabethtown College's campus. Such a complex would provide updated facilities for the athletic teams as well as give increased access for students seeking improved physical and mental wellness. Aside from the major undertaking of funding such a large facility, the environmental impacts of such a structure need to be considered. In particular, the additional surface water runoff due to the large footprint of the building may compromise the recently renovated dam on Lake Placida. The campus is generally sloped towards Lake Placida, and consequently, a substantial portion of storm water from the immediate area is conveyed to it. Given the size and scope of the proposed building, a significant amount of additional runoff may impact the lake and dam. As a part of their Engineering 265, Fluid Mechanics and Hydrology Course, students were tasked with determining the hydrological impacts of the proposed Sports/Fitness/Wellness center. Several different scenarios were considered (a) citing the building in a previously undeveloped portion of campus versus citing it in a portion of campus where current buildings are located (b) building a larger facility that would house an NCAA regulation size track vs. a smaller facility with shorter track. Students also determined possible mitigation strategies to prevent negative storm water effects.

11:45 AM FEAST (Future Energies and Sustainable Technologies) Club Activities # 233

Presenters: James Annab, Matt Klempa, Jack Hess, Anthony Fraccica

Mentor: Dr. Tomás Estrada
Moderator: Joseph Wunderlich,
Tomás Estrada

Officers from the student organization FEAST (Future Energies and Sustainable Technologies) will provide a talk describing the club's efforts. The presentation will include a brief history of FEAST, a summary of recent projects, as well as a description of ideas for future activities.

6th Scholarship and Creative Arts Day

SCAD Presentations

By Department

12:00 PM Social-networking, Crowd-sourcing Teamwork to Rapidly-Prototype Green Architecture and Communities # 234

Presenter: Richard Sturz

Mentor: Dr. Joseph Wunderlich
Moderator: Joseph Wunderlich,
Tomás Estrada

This talk highlights an interdisciplinary effort to design green architecture and towns using Minecraft, a sandbox social-networking creative building environment where people from around the world collaborate to build Green buildings and towns in virtual worlds. These virtual environments include computer-generated biomes with varied terrains and weather patterns that designers adapt to. All man-made structures, Landscaping, and gardens are built block by block using a very large inventory of simulation-primitives. Many successful experiments were conducted on two Elizabethtown College sponsored computer servers to allow collaboration between students in several courses: FYS100 Scientific Modeling for Sport, EGR/CS332 Computer Organization & Design, EGR343 Green Architectural Engineering, and CSC462 Cognitive Science Capstone. One experiment included 25 visiting high-school students. This technology has been adapted by the United Nations for community design of 300 sites around the world, and Elizabethtown college students will soon become involved with these international efforts.

12:15 PM Solar Decathlon Charrette # 235

Presenter: Vaclav Hasik

Mentor: Dr. Joseph Wunderlich
Moderator: Joseph Wunderlich,
Tomás Estrada

A charrette is a conceptual design and planning technique where members of a design team discuss and debate various perspectives. This charrette focuses on the design of a sustainably-designed small home that is transportable to the United States solar decathlon competition. This type of interactive design is an integral part of the LEED process (Leadership in Energy and Environmental Design).

Engineering Poster Masters Atrium

1:15 PM LEED (Leadership in Energy and Environmental Design) Architectural Designs # 410(A-E)

Presenters: Shane Weller, Kyle Wilt, Meghan Donohue, Vaclav Hasik, Emily Vogel

Mentor: Dr. Joseph Wunderlich
Moderator: Joseph Wunderlich,
Tomás Estrada

A collection of the very best posters displaying LEED architectural works of Elizabethtown College Sustainable Design Engineering Majors.

English Panel of Presentations H-107

8:30 AM Multicultural and Transnational Literature # 12

Presenters: Nathan Blunk, Gina Kurtz, Kaitlyn Pellegrino

Mentor: Dr. Rebecca Olson
Moderator: Dr. Rebecca Olson

Multicultural and Transnational Literature

English Reading H-214

8:15 AM Category Four # 46

Presenter: Jessica Manchak

Mentors: Dr. David Downing,
Dr. John Rohrkemper

This literary piece was written for Dr. Rohrkemper's Short Story class. The inspiration for this story came from my many trips to the Florida Keys. Often during my visits to the Keys, I have noticed homeless veterans living in the parks and along the beaches. High numbers of homeless people travel to the Keys to live in the warm weather surrounded by what I believe are the most beautiful beaches in the world. However, almost every year the Keys are in the projected path of a hurricane. I have always wondered where the homeless seek refuge when hurricanes tear through the Keys. So I wrote this story trying to imagine what it might be like for a homeless man who decides not to evacuate, to try and ride out the storm with only his dog to keep him company.

8:45 AM The Eastern Widow: A Short Story # 47

Presenter: Brighid Flynn

Mentor: Dr. John Rohrkemper

A short story about the assisted-living-bound George Whelan who reflects on his childhood and the day when he learned the importance of having dreams and what it means to love beyond physical boundaries.

6th Scholarship and Creative Arts Day

SCAD Presentations

By Department

9:00 AM Haiku and the Balance of Life

48

Presenter: Christian Sammartino

Mentor: Dr. Matthew Willen

Haiku poetry is relevant in modern America due to the essential nature of the poetic form. This form requires writers to carefully analyze a moment in nature and weigh its natural context. Haiku writers cultivate mindfulness about their surroundings, and learn about the interconnectedness of the world. Therefore, writers glean the ability to measure the impact of actions and reactions in the natural world. As a result, Haiku writing can be utilized as a method for attaining balance in life. The Japanese poet Matsuo Basho takes this process of gaining knowledge to a new level in his travel narrative *A Narrow Road to the Deep North*. Basho intertwines prose and Haiku to illuminate the stages of his journey. In the process, he learns many lessons about himself and his natural surroundings. In order to evaluate how Haiku affects our worldview, I tested Basho's method of composition. I compiled my own travel narrative with intertwined Haiku. My Journey recounts several experiences in the Connecticut State Forest and New England. I will present basic components of the Haiku form, Basho's theory of composition, and the results of my experiment with Haiku. In addition, I will display how Haiku writing can be a prescription to attain peace in our fast-paced technological society.

English Paper Presentation H-214

9:30 AM "The rest is cheating": Realism and Satire in *The Adventures of Huckleberry Finn* # 135

Presenter: Rebecca Olsen

Mentor: Dr. John Rohrkemper

Mark Twain's *Huckleberry Finn* ends with an elaborate eleven-chapter escape plan for Jim, which not only ultimately fails but also is proved irrelevant by Miss Watson's miraculous deathbed grant of freedom. The main character of Huck Finn retreats to the shadows and allows the long-absent Tom Sawyer to step in and lead the escape. Jim's struggle for freedom seems to be reduced to little more than a child's game, full of ridiculous and unnecessary schemes that Jim somehow goes along with. I would suggest that the ending is a result of Twain's reluctance to openly defy social boundaries but that its exaggerated nature is not to be taken seriously. Readers during the time period were not ready for the radical themes the novel suggests, so Twain gave them what he knew had previously worked. However, by overdoing the adventurous, slapstick ending, Twain adds a darker satirical element to the novel that can be overlooked by readers not willing to accept a serious and radical ending. Though this can be viewed as a clever tactic to both please his audiences and maintain some of the theme of the novel, it is ultimately a betrayal of realism and a problematic end to an otherwise ground-breaking novel.

9:45 AM Higher Education and Free Video Course Materials Development and Distribution: A case study review of the diverse ways in which MIT and HACC create and disburse free video course materials # 136

Presenter: S. Alexandra Ward

Mentor: Dr. Matthew Skillen

The Do-It-Yourself education culture has become a popular trend in higher education. iTunesU features free video lectures from top Universities around the world and community colleges alike. The methods for producing and distributing these materials are different for every institution. This study has set out to investigate the ways in which institutions disburse free video course materials and the ways in which different institutions of higher learning excel and fail at this disbursement. And, this paper presentation will discuss the methods of two institutions: Massachusetts Institute of Technology and Harrisburg Area Community College. By dissecting the diverse ways in which the schools create and disburse these materials it will help educators understand the different but equally effective ways in which their classes and lectures can affect the global student body. My paper presentation will include a summary of the raw interview data collected from both of the aforementioned institutions, as well as an analysis of the project's findings.

English Panel of Presentations H-214

11:00 AM Proofing the Proverbs: Romantic Ideas in William Blake's *Proverbs of Hell* # 270

Presenter: Shanna Kirgan

Mentor: Dr. Kimberly Adams
Moderator: Kimberly Adams

"Without Contraries is no progression. Attraction and Repulsion, Reason and Energy, Love and Hate are necessary to Human existence" (*Marriage of Heaven and Hell*, plate 3). During the English Romantic period, a major shift in ways of thinking in the general public took place, tending towards self-expression, imagination, and passion. In his work *The Marriage of Heaven and Hell*, William Blake demonstrates some of the prevalent ideas of the Romantic period by challenging old values through his reversal of conventional ideas of "Good" and "Evil." Blake associates all that is Evil (in his view) with Reason and the Soul and all that is Good (in his view) with Energy and the Body. His section entitled "Proverbs of Hell," Blake highlights the dichotomy of the modest Soul and the passionate Body through the contraries represented in each proverb. Three groups of contraries that illuminate the overarching ideas of *The Marriage of Heaven and Hell*, as well as the Romantic period as a whole, are Truth vs. Imagination, Passivity vs. Action, and Restriction vs. Freedom. Each of the eight Proverbs of Hell analyzed in this paper have been sorted into one of three contraries which all have a tie to the central conflict of Reason (Evil/Soul) vs. Energy (Good/Body). Further, each proverb has been broken down into a set of proofs to both demonstrate the ties between the proverb and Blake's views on Good and Evil, and reveal the most basic meaning of the proverb.

6th Scholarship and Creative Arts Day

SCAD Presentations

By Department

11:15 AM From Self-Deprecation to the Path of Recovery: Child Abuse in Charlotte Bronte's *Jane Eyre* # 271

Presenter: Brighid Flynn

Mentor: Dr. Kimberly Adams
Moderator: Kimberly Adams

It is in the darkest of times that character is built and sculpted. Adversity can beat anyone down, but it is the person's character that rises from the ashes of destruction that matters in the end. This rebirth can yield one of two types of people: a better person materializes because of their struggles or the pain is internalized and inadvertently allowed to shape one's actions. Charlotte Brontë's Gothic heroine Jane Eyre, the title character of her literary masterpiece, seems to fall into the latter category. She is a neglected and abused child, looked down upon by the only family she is known to have left in the world and beaten down, emotionally and physically, by everyone around her. Looking at the novel through a strictly Victorian-Era lens, this child maltreatment does not necessarily seem out of place. However, the psychological repercussions of abuse are prevalent nevertheless. Brontë's Jane Eyre is a bildungsroman that traces Jane's psychological growth from childhood to adulthood. Although the abuse and mistreatment from her childhood cause negative repercussions later on in her life, namely her pessimistic and self-deprecating views, especially in her quest for love and companionship, Jane overcomes the psychological trauma to gain for herself the happiness and love she always coveted.

11:45 AM Healing through Fiction: Charlotte Bronte's *Villette* # 272

Presenter: Christine Kelley

Mentor: Dr. Kimberly Adams
Moderator: Kimberly Adams

In her semi-autobiographical novel *Villette*, Charlotte Brontë drew on personal experiences from her time studying abroad in Brussels, Belgium. She reworked the material at least twice (first in her novel *The Professor*) to deal with the emotional scars that remained from this difficult period in her life. The tale recalls her own time as a student and teacher in Brussels. Constantin Heger, Charlotte Brontë's brilliant French professor, had an enduring intellectual and emotional impact on her writings—although it seems for all the brilliant love stories he inspired, Brontë's affections for her teacher were not reciprocated. Romance between student and teacher, especially the accompanying power play, is a dominating force in the novel; in fact, motifs of unequal partnerships appear throughout Brontë's works. *Villette* is centered on a young English protagonist—Lucy Snowe—who sails off for a distant land without much certainty about her future. The novel elucidates Brontë's own rise during her Brussels years, as Lucy through teaching is able to find her niche. Of course, the author herself was not so lucky. Based on the close resemblance that M. Paul Emanuel in *Villette* holds to M. Heger, Charlotte's last novel makes a logical exhibit of Heger's influence. Of course, Brontë received a different romantic fate than Lucy does: her protagonist found love, while the author was left alone. *Villette* shows the masterful crafting of material from Charlotte Brontë's life into fiction, and the ultimate method for setting painful memories free—by casting them out to sea.

12:15 PM Understanding Prufrock, a Character in T. S. Eliot's "The Love Song of J. Alfred Prufrock" # 273

Presenter: Kaitlyn Pellegrino

Mentor: Dr. Kimberly Adams
Moderator: Kimberly Adams

T.S. Eliot's "The Love Song of J. Alfred Prufrock" first appeared in 1915 in *Poetry* magazine. The poem itself was written in the form of a dramatic monologue. The speaker, J. Alfred Prufrock, tells the readers his thoughts through another writing style, stream of consciousness. To help better understand the poem, "The Love Song of J. Alfred Prufrock" can be divided into three sections: Prufrock on the city streets, Prufrock at parties, and Prufrock with a woman. Prufrock is not the average love writer, and at the very start of the poem the readers begin to realize the poem is more about Prufrock's problems than it is a love story. In fact, the poem emphasizes Prufrock's distress in social situations, distress with the opposite gender, and distress about living life properly and to its fullest. In this piece, the readers discover that the title of the poem is very misleading, and discovers much about Prufrock as an individual, and his struggles with the inevitable in life.

English Panel of Readings H-214

1:15 PM Rise: A Short Story # 390

Presenter: Jenell Abram

Mentors: Dr. David Downing,
Dr. John Rohrkemper
Moderator: Dr. David Downing

For my honors project as an English Professional Writing major, I have been working on writing a collection of short fiction stories, equal to roughly 60 pages of work, centered on themes of loss of innocence, sexual awakening, and coming of age. In writing this collection of stories, I have explored these themes through the perspectives of both male and female narrators, as well as from the perspectives of narrators ranging from nine to forty-eight years old. The story I will be reading for the panel is entitled *Rise* and is from the perspective of nine-year-old Annie who lives in the city with her distant father. Annie's mother passed away when she was too young to remember, which has left her father feeling overwhelmed with trying to be both parents and hold down a corporate job. His preoccupation leaves Annie with a lot of time to herself, and one day while she is walking to school, she notices a man wheeling around a strange cart that she believes is a bomb. Concerned that the man might try to hurt someone, she tells her friend Rosa about the sighting. However, as the story continues, we soon find out that Rosa, who is being abused by her father, has her own troubles to deal with. This story works to weave three different motifs together, including a young girl's paranoia, the search for a father figure, and a friend's abuse.

6th Scholarship and Creative Arts Day

SCAD Presentations

By Department

1:45 PM "What Lies Beyond the Green": Chapter from a novella

391

Presenter: Lauren Stine

Mentor: Dr. David Downing
Moderator: Dr. David Downing

This novella is being written as a personal exploration into creative writing and fulfills the requirements for Honors in the Discipline for the English Department. As part of my presentation, I will read an excerpt from the first chapter of the novella, talk about my writing process, and welcome questions from audience members.

The story: Phillip Graham's life has been blessed with what many may call luck of the genes. Born to affluent parents, Phillip finds himself in medical school and will graduate debt-free in a year and a half. Even though the path of success seems imminent, fractures begin to run through Phillip's future when he begins to recall his past...and another's. In a turn of circumstances, Phillip finds himself on medical leave from school, unable to distinguish between his own life with dysfunctional family parents and work, and the life of a soldier on the battle front of the Vietnam War. With pressure mounting on him from his parents to pick up the pieces of his shattered memory and return to medical school, Phillip finds solace only with Ted, a disabled veteran who resides at the veteran's hospital where Phillip is an orderly. Will Phillip come to terms with what everyone states is a fact – that his memories and flashbacks of the war are all in his head, - or will Phillip finally discover what lies beyond the green jungle of his consciousness?

2:15 PM "Hinterland": Chapter from a novel-in-progress

392

Presenter: Kaitlin Koons

Mentor: Dr. David Downing
Moderator: Dr. David Downing

Set in a post-apocalyptic world, "Hinterland" explores the devastating effects that widespread disease and disaster can have on a modernized nation, from governmental and societal structure to individual souls. The story focuses on the plight of two wayward survivors: their struggle to survive, to find meaning in their new existence, to physically and emotionally adapt to their new environment, and to retain their authentic selves in an era of great suffering, great despair, and a redefinition of what it means to be human. Miles and Toby are teenaged brothers attempting to navigate the aftermath of society's collapse, their peaceful life in the countryside long forgotten as they traverse a new and frightening landscape. With only a double-barrel shotgun, a few meager supplies, and their wits, they must defend themselves against a plethora of dangers, from natural disasters to human evils. The boys have already lost their home, their parents, and their only means of long-term transportation. They are now forced to travel on foot, keeping off main roads and highways for fear of the gangs of paramilitary survivalists who patrol them. The brothers' ultimate goal is to reach a refugee camp nestled between the peaks of a distant mountain range; they soon discover that the journey will be far more difficult than they ever imagined. A table-turning night at the edge of a canyon will force the young travelers to make an impossible choice between their will to survive and their will to preserve the last remaining shreds of their humanity. The choice they make will ultimately redefine them, not just as individuals, but as human beings.

Fine and Performing Arts

Paper Presentation

H-215

8:15 AM Song Stories to Change Coping, Anxiety, and Knowledge during Pediatric Outpatient Procedures

51

Presenters: Rachel Bucher, Cassandra Summers

Mentor: Dr. Gene Behrens

The purpose of this study is to determine whether a difference exists between children's perceived anxiety, coping abilities, and understanding of their upcoming outpatient, medical procedure when participating in a song-story singing experience or listening to a spoken story script. The children, 5 to 10 years old, will be selected as a sample of convenience from a local hospital. They need to be receiving one of three outpatient procedures: IV starts, dressing changes, or port accessing and have had only one prior visit for the procedure. Each participant will be randomly assigned to the sung song-story or the spoken story-script experience which they will receive before their medical procedure. Both experiences will involve the children in a story that describes their specific medical procedure and suggests various coping strategies. The sung song-story will involve the children in a sung, instrumental experience; the spoken story-script will involve the children in listening to a read story. The pretest measures will include the children's self-rating of their present, perceived level of anxiety using a picture scale and the researcher's rating of the child's anxiety using the same scale. The posttest measures will include a second rating on the perceived anxiety scale by the children and on the same scale by the researchers. The children also will complete a 6-question coping skill measure and a 3-question measure evaluating their knowledge of the upcoming procedure. Results will assist music therapists in developing song-story protocol that prepares children for medical procedures.

6th Scholarship and Creative Arts Day

SCAD Presentations

By Department

8:45 AM **Thematic Guide of Songs for Adolescents with Antepartum Depression** **# 52**
Presenter: Monica Caluda Mentor: Dr. Gene Behrens

The purpose of this research is to collect, analyze, and synthesize a collection of popular songs that can be used in music therapy with pregnant adolescents diagnosed with antepartum depression. Though rarely discussed, music therapy has the potential to provide treatment for teenage mothers dealing with depression (Gooding & Mori-Inoue, 2011). An initial review of the literature was used to identify a comprehensive list of needs for this population; the researcher then categorized this list of the needs for use in coding the lyrical content of each song. The categories of need include: emotional, cognitive, behavioral, physical, financial, and support from relationships. Examples of the coded areas under emotional needs are fear, hopelessness, and loneliness. A list of music components and identifying features also was compiled to categorize the music (mode, tempo, dynamic range, rhythmic activity, pitch range, melodic contour) and other important characteristics of each song, (instrumentation, genre, artist, copyright year, and composer). Fifty songs will be selected and analyzed according to the two sets of criteria. Once coded, the songs will be compared to identify possible trends in the themes, the music components, and the other important features; a cross comparison between the themes and music components and other important features also will be conducted. Besides providing an analysis of themes and accompanying music components in the lyrics, this research will result in an annotated, thematic guide of 50 popular songs with lyrics for use in lyric discussions, song writing, or other related experiences with this population

9:30 AM **The Effects of Preselected Versus Preferred Music on Self-reported Pain, Discomfort, and Relaxation During Dental Procedures** **# 140**
Presenters: Cassandra Summers, Rachel Bucher, Kate Holsopple Mentor: Dr. Gene Behrens

The purpose of this study is to determine whether there is a difference between participants' perceived pain, discomfort, and relaxation levels when listening to either preselected or preferred music during a dental drilling procedure. Eleven patients participated as a sample of convenience in the preliminary stage of the study; data are being collected on additional patients to complete the study. Participants need to have had at least one prior drilling procedure and be aged 21 to 60. They are randomly assigned to the preferred or preselected listening groups. Pretest ratings are collected on the patients' previously perceived pain, discomfort, and relaxation during prior dental drilling procedures. During the current dental drilling procedure, the preferred group listens to their choice of playlists from 12 genres, and the preselected group listens to a playlist randomly selected from the 12 genres with selections from their top three preferred genres removed. At the end of the dental appointment, posttest ratings are collected on the patients' perceived pain, discomfort, and relaxation levels during the procedure. Participants also rate their view of the music's influence on their perceived pain, discomfort, and relaxation level. 2x2 mixed ANOVAs will be calculated to evaluate differences in the perceived pretest-posttest pain, discomfort, and relaxation levels. Independent t-tests will be used to evaluate difference in participants' view of music's influence on pain, discomfort, and relaxation level. Preliminary analyses on the 11 participants suggested significant differences in the relaxation levels during the dental drilling procedure for the preferred music listening group.

10:00 AM **Significance of Body Language in Identifying Emotional Content in Music** **# 141**
Presenters: Josh Stevenson, Monica Caluda Mentor: Dr. Gene Behrens

This study sought to determine if performers' body language help people identify the emotional content in music. Three emotions, angry, sad, and scared, were examined within two different listening conditions, video/audio and audio only. Sixty participants from a local college, mean age=20.17, were obtained as a sample of convenience and randomly assigned to the listening conditions. Two violinists were video recorded recreating improvisations identified as expressing each emotion (Behrens, 1997). After listening or watching and listening to the six performances for their condition, participants rated the emotional content of each performance using a 5-point Likert scale for each emotion. A total score for each item was calculated by averaging the two incorrect ratings and subtracting them from the correct rating. Results, evaluated at $\alpha = .05$, indicated a non-significant interaction for the 2x2 mixed ANOVA design, $F(2) = .44$, $p = .643$. The small effect size, $\eta^2 = .01$, further supported the results. These findings suggest watching a musical performance does not provide information that increases ability to identify emotions in a performance. Visual cues seem to not add significant information to the critical auditory cues used by music therapists to interpret the emotional content within their client's music.

6th Scholarship and Creative Arts Day

SCAD Presentations

By Department

11:00 AM The Effectiveness of Music Therapy to Teach Conflict Transformation Skills # 280
Presenter: Kate Holsopple Mentor: Dr. Gene Behrens

While conflict may be inevitable, its effects can be minimized through conflict transformation methods. Music as a tool in therapy is often viewed as uniting and therefore, could aid in conflict transformation. There is a dearth, however, of information connecting the use of music in therapy to develop conflict transformation skills (Urbain, 2008). The purpose of this study is to develop and evaluate a music therapy protocol to teach conflict transformation skills to children. Eight children from a residential facility were selected as a sample of convenience to participate in four 30-min music therapy sessions. Prior to and following the four sessions, children also will participate in two measurement sessions, each involving two measures. One measure will involve the children responding to questions about a story to assess empathy, listening skills and emotional self-regulation. For the second measure, children will participate in a group activity designed to assess collaboration and brainstorming. The music therapy sessions will involve rhythmic improvisation and structured instrument playing to develop the conflict transformation skills: empathy, listening, emotional coping, collaboration, and brainstorming. One-way repeated measure ANOVAs, evaluated at an $\alpha = .05$, will be used to assess differences in each of the five dependent measures, empathy, listening, emotional coping, collaboration, and brainstorm. The results will help music therapists address the common occurrence of conflicts that exist across all populations.

11:30 AM The Effect of Background Music on Creative Components in Drawing # 281
Presenters: Anna Matlack, Elizabeth Carras, Robert Otto Mentor: Dr. Gene Behrens

The purpose of this study was to determine whether background music had an effect on six performance criteria used to evaluate a visual drawing task, and whether this difference varied across music majors/minors and students who did not study music. Eighty college-aged participants, collected as a sample of convenience, completed one 6-min drawing using oil pastels within each of the two background conditions, piano music and no music. The order of presentations was randomized for each of the testing groups. Three researcher-collected measures were used to evaluate the creative process: latency to begin drawing, number of colors used, percent of paper covered. The participant-collected measures included three 5-point self-rated scales that assessed their level of focus, inspiration, and comfort levels during the task. Results from six 2x2 mixed ANOVAs, evaluated at $\alpha = .05$, indicated no significant interaction effects for the three researcher-collected and three participant-collected measures. The main effect for background condition indicated a significant increase for one researcher-collected measure, percent of paper covered ($p = .003$), and for all three participant-collected measures, being focused ($p = .000$), being inspired ($p = .000$), and being comforted ($p = .000$). These results suggest music can affect self-perceived levels of creativity and volume of product. When background music is paired with therapeutic drawing experiences, clients may create drawings that have a greater scale while feeling more comfortable, focused, and inspired during the process. When clients feel more comfortable, they tend to be more open to the therapeutic effects of music and art therapy.

12:00 PM A Comparative Analysis of Older Adults & Adolescents' Rhythmic Improvisations # 282
Presenter: Josh Stevenson Mentor: Dr. Gene Behrens

Clinical improvisation skills often are challenging for music therapy students. Limited research and teaching materials, however, are available to assist students in developing these skills. An analysis and comparison of improvisations from older adults and adolescents would assist students in developing music interaction skills and gain insights into the clients' needs. This study seeks to compare and contrast rhythmic, drum improvisations recorded from older adults and adolescence to identify characteristics that the researcher can use to further develop his clinical keyboard improvisation skills with the two populations. The study involves two different data collections and sets of analyses. Five adolescents and five older adults will be individually recorded playing improvisations on a drum. Initially, two 30-s solo improvisations will be recorded, and then one 2-min improvisation will be recorded while the researcher accompanies the participant on piano. Both sets of recorded improvisation will be analyzed based on four musical elements: meter/tempo, phrases/form, rhythmic motives, and dynamics. A comparison of the resulting music analysis for the two sets of initial improvisations will be used to inform the researcher of accompaniment styles that can be differentially used during the second collection of data. The music analyses from both sets of recorded improvisations then will be compared and conclusions and suggestions made based on these comparisons. The results of this study will provide quantitative and qualitative information about how the two client populations perform rhythmic, drum improvisations and how music therapists can use that information to support clients' musical needs during co-improvisations.

1:15 PM Navigating Connection: The Role of Music in an Evangelical Hispanic Church # 400
Presenter: Elizabeth Carras Mentor: Dr. Kevin Shorner-Johnson

Music has frequently been used as a means of navigating connections to culture as one culture becomes assimilated within the context of another. This study sought to understand the experience of music within the diverse community of an Evangelical Hispanic Church. Researchers conducted interviews ($n=6$) and participant-observation as a means of understanding the experience of music within the church. Data were analyzed using grounded theory methodology; using coding, memo writing, and transcript summaries to organize and sift data into analytic categories. The data revealed the importance of music in worship and in connecting with cultural identity. Themes included the purposeful use of music as a transition, as a conduit for the Holy Spirit, as therapy, and as a way of connecting to share cultural experiences with the younger generation. While some families had recently moved to the United States and were adapting to US norms, others were experiencing a generational shift as participants attempted to connect children to cultural roots.

6th Scholarship and Creative Arts Day

SCAD Presentations

By Department

1:30 PM Performance Practice and the Effect Thereon of Beethoven's Piano Concerto No. 5 # 401

Presenter: Joanna Gruber

Mentor: Dr. E. Douglas Bomberger

This paper explores how Ludwig van Beethoven's Concerto No. 5, the "Emperor" concerto, relates to performance practice in keyboard concertos of the late eighteenth and early nineteenth centuries, especially with regard to Beethoven's written-out cadenza in the first movement. The paper also discusses later works that might reflect an influence of the "Emperor" concerto. In the early nineteenth century, performers still usually improvised cadenzas. Various levels of "improvising" are discussed, including completely spontaneous creation, improvisations created from an outline, and material entirely written down (e.g. for teaching purposes). The general traits of typical cadenzas are outlined, and Mozart's cadenza for K. 488 is used to illustrate these traits. The paper then turns to the "Emperor" concerto, explaining that it took a new approach to the cadenza by requiring the performer to play what was written. Possible reasons for this divergence from tradition are discussed, including purpose (publication, performance, or teaching), content (in relation to the rest of the piece), or foresight of compositional trends. Finally, the paper discusses piano concertos after the "Emperor," explaining that cadenzas were more often written out and, as the general form of the concerto began to break down, so did the form of cadenzas. The paper discusses more specifically a few concertos, including Liszt's Piano Concerto in E-flat Major and Schumann's Piano Concerto in A Minor. Besides commenting that the cadenzas to these concertos are written out, the author also discusses topics such as placement, content, and purpose of the cadenzas.

2:00 PM The Tango and Argentine Identity # 402

Presenter: Cassandra Summers

Mentor: Dr. E. Douglas Bomberger

As the dancers move across the floor, their movements are quick, but small. Together, they must be accurate and precise, in perfect unity to draw the eye. This paper looks at the origin of the Tango in Argentina, and how it helped to create a sense of identity in which all citizens could identify. The paper begins with how the lower class and immigrants used the tango as a way to express their hardships of life and love, dancing on the streets and in the brothels of Buenos Aires. Eventually, when it traveled overseas to Europe, it spread and gained popularity. The middle class began to identify with the tango, and a very important figure, Carlos Gardel, created a new era of the tango, emphasizing the splendor of its song and lyrics. The upper class soon took ownership as well, realizing they, too, could identify with its lyrics and passion, but for different reasons, such as the hardships of success. This genre underwent a fascinating transformation over the twentieth century, uniting the country's citizens, and creating a distinct national identity. The popularity of the dance is still seen today in competitions and through tourism; however, the deeper meaning is not as well known and doesn't allow us to appreciate the true and genuine characteristics of it. Key attributes of the song and lyrics, along with its close connection to Argentines' lifestyle, allowed the tango to become a truly authentic and beautiful style of dance and song.

Fine and Performing Arts Poster Masters Atrium

1:15 PM The Effects of Preselected Versus Preferred Music on Self-reported Pain, Discomfort, and Relaxation During Dental Procedures # 411

Presenters: Rachel Bucher, Kate Holsopple, Cassandra Summers

Mentor: Dr. Gene Behrens

The purpose of this study is to determine whether there is a difference between participants' perceived pain, discomfort, and relaxation levels when listening to either preselected or preferred music during a dental drilling procedure. Eleven patients participated as a sample of convenience in the preliminary stage of the study; data are being collected on additional patients to complete the study. Participants need to have had at least one prior drilling procedure and be aged 21 to 60. They are randomly assigned to the preferred or preselected listening groups. Pretest ratings are collected on the patients' previously perceived pain, discomfort, and relaxation during prior dental drilling procedures. During the current dental drilling procedure, the preferred group listens to their choice of playlists from 12 genres, and the preselected group listens to a playlist randomly selected from the 12 genres with selections from their top three preferred genres removed. At the end of the dental appointment, posttest ratings are collected on the patients' perceived pain, discomfort, and relaxation levels during the procedure. Participants also rate their view of the music's influence on their perceived pain, discomfort, and relaxation level. 2x2 mixed ANOVAs will be calculated to evaluate differences in the perceived pretest-posttest pain, discomfort, and relaxation levels. Independent t-tests will be used to evaluate difference in participants' view of music's influence on pain, discomfort, and relaxation level. Preliminary analyses on the 11 participants suggested significant differences in the relaxation levels during the dental drilling procedure for the preferred music listening group.

6th Scholarship and Creative Arts Day

SCAD Presentations

By Department

1:15 PM Thematic Guide of Songs for Adolescents with Antepartum Depression # 412
Presenter: Monica Caluda Mentor: Dr. Gene Behrens

The purpose of this research is to collect, analyze, and synthesize a collection of popular songs that can be used in music therapy with pregnant adolescents diagnosed with antepartum depression. Though rarely discussed, music therapy has the potential to provide treatment for teenage mothers dealing with depression (Gooding & Mori-Inoue, 2011). An initial review of the literature was used to identify a comprehensive list of needs for this population; the researcher then categorized this list of the needs for use in coding the lyrical content of each song. The categories of need include: emotional, cognitive, behavioral, physical, financial, and support from relationships. Examples of the coded areas under emotional needs are fear, hopelessness, and loneliness. A list of music components and identifying features also was compiled to categorize the music (mode, tempo, dynamic range, rhythmic activity, pitch range, melodic contour) and other important characteristics of each song, (instrumentation, genre, artist, copyright year, and composer). Fifty songs will be selected and analyzed according to the two sets of criteria. Once coded, the songs will be compared to identify possible trends in the themes, the music components, and the other important features; a cross comparison between the themes and music components and other important features also will be conducted. Besides providing an analysis of themes and accompanying music components in the lyrics, this research will result in an annotated, thematic guide of 50 popular songs with lyrics for use in lyric discussions, song writing, or other related experiences with this population

1:15 PM The Effect of Background Music on Creative Components in Drawing # 413
Presenters: Elizabeth Carras, Anna Matlack, Robert Otto Mentor: Dr. Gene Behrens

The purpose of this study was to determine whether background music had an effect on six performance criteria used to evaluate a visual drawing task, and whether this difference varied across music majors/minors and students who did not study music. Eighty college-aged participants, collected as a sample of convenience, completed one 6-min drawing using oil pastels within each of the two background conditions, piano music and no music. The order of presentations was randomized for each of the testing groups. Three researcher-collected measures were used to evaluate the creative process: latency to begin drawing, number of colors used, percent of paper covered. The participant-collected measures included three 5-point self-rated scales that assessed their level of focus, inspiration, and comfort levels during the task. Results from six 2x2 mixed ANOVAs, evaluated at $\alpha=.05$, indicated no significant interaction effects for the three researcher-collected and three participant-collected measures. The main effect for background condition indicated a significant increase for one researcher-collected measure, percent of paper covered ($p = .003$), and for all three participant-collected measures, being focused ($p = .000$), being inspired ($p = .000$), and being comforted ($p = .000$). These results suggest music can affect self-perceived levels of creativity and volume of product. When background music is paired with therapeutic drawing experiences, clients may create drawings that have a greater scale while feeling more comfortable, focused, and inspired during the process. When clients feel more comfortable, they tend to be more open to the therapeutic effects of music and art therapy.

1:15 PM The Effectiveness of Music Therapy to Teach Conflict Transformation Skills # 414
Presenter: Kate Holsopple Mentor: Dr. Gene Behrens

While conflict may be inevitable, its effects can be minimized through conflict transformation methods. Music as a tool in therapy is often viewed as uniting and therefore, could aid in conflict transformation. There is a dearth, however, of information connecting the use of music in therapy to develop conflict transformation skills (Urbain, 2008). The purpose of this study is to develop and evaluate a music therapy protocol to teach conflict transformation skills to children. Eight children from a residential facility were selected as a sample of convenience to participate in four 30-min music therapy sessions. Prior to and following the four sessions, children also will participate in two measurement sessions, each involving two measures. One measure will involve the children responding to questions about a story to assess empathy, listening skills and emotional self-regulation. For the second measure, children will participate in a group activity designed to assess collaboration and brainstorming. The music therapy sessions will involve rhythmic improvisation and structured instrument playing to develop the conflict transformation skills: empathy, listening, emotional coping, collaboration, and brainstorming. One-way repeated measure ANOVAs, evaluated at an $\alpha = .05$, will be used to assess differences in each of the five dependent measures, empathy, listening, emotional coping, collaboration, and brainstorm. The results will help music therapists address the common occurrence of conflicts that exist across all populations.

6th Scholarship and Creative Arts Day

SCAD Presentations

By Department

1:15 PM Significance of Body Language in Identifying Emotional Content in Music # 415
Presenters: Josh Stevensen, Monica Caluda Mentor: Dr. Gene Behrens

This study sought to determine if performers' body language help people identify emotional content in music. Three emotions, angry, sad, and scared, were examined within the context of two different listening conditions, video and audio combined and audio only. Sixty participants from a local college, mean age=20.17, were obtained as a sample of convenience and randomly assigned to the listening conditions. Two violinists were video recorded recreating improvisations found to express each of the three emotions based on Behrens' (1997) recordings, thus creating a total of 6 performances for each condition (emotions x type of performance). Participants in each listening condition were presented with the six performance recordings for their assigned condition. After listening or watching and listening to the six performances for their condition, participants rated the emotional content of each performance using a 5-point Likert scale for each emotion. A total score for each item was calculated by averaging the two incorrect ratings and subtracting them from the correct rating. Results evaluated at Alpha=.05 indicated a non-significant interaction for the 2x2 mixed ANOVA design, $F(2) = .44$, $p = .643$, Partial $\eta^2 = .008$. The small effect size index further supported the nonsignificant results. These findings suggest that watching a musical performance does not add information for correctly identifying the emotions in a performer's music. Within the field of music therapy, the results suggest that visual cues may not add significant information to the critical auditory cues used by music therapists to interpret the emotional content within their client's music.

1:15 PM A Comparative Analysis of Older Adults & Adolescents' Rhythmic Improvisations # 416
Presenter: Josh Stevenson Mentor: Dr. Gene Behrens

Clinical improvisation skills often are challenging for music therapy students. Limited research and teaching materials, however, are available to assist students in developing these skills. An analysis and comparison of improvisations from older adults and adolescents would assist students in developing music interaction skills and gain insights into the clients' needs. This study seeks to compare and contrast rhythmic, drum improvisations recorded from older adults and adolescence to identify characteristics that the researcher can use to further develop his clinical keyboard improvisation skills with the two populations. The study involves two different data collections and sets of analyses. Five adolescents and five older adults will be individually recorded playing improvisations on a drum. Initially, two 30-s solo improvisations will be recorded, and then one 2-min improvisation will be recorded while the researcher accompanies the participant on piano. Both sets of recorded improvisation will be analyzed based on four musical elements: meter/tempo, phrases/form, rhythmic motives, and dynamics. A comparison of the resulting music analysis for the two sets of initial improvisations will be used to inform the researcher of accompaniment styles that can be differentially used during the second collection of data. The music analyses from both sets of recorded improvisations then will be compared and conclusions and suggestions made based on these comparisons. The results of this study will provide quantitative and qualitative information about how the two client populations perform rhythmic, drum improvisations and how music therapists can use that information to support clients' musical needs during co-improvisations.

1:15 PM Song Stories to Change Coping, Anxiety, and Knowledge during Pediatric # 417
Outpatient Procedures
Presenters: Cassandra Summers, Rachel Bucher Mentor: Dr. Gene Behrens

The purpose of this study is to determine whether a difference exists between children's perceived anxiety, coping abilities, and understanding of their upcoming outpatient, medical procedure when participating in a song-story singing experience or listening to a spoken story script. The children, 5 to 10 years old, will be selected as a sample of convenience from a local hospital. They need to be receiving one of three outpatient procedures: IV starts, dressing changes, or port accessing and have had only one prior visit for the procedure. Each participant will be randomly assigned to the sung song-story or the spoken story-script experience which they will receive before their medical procedure. Both experiences will involve the children in a story that describes their specific medical procedure and suggests various coping strategies. The sung song-story will involve the children in a sung, instrumental experience; the spoken story-script will involve the children in listening to a read story. The pretest measures will include the children's self-rating of their present, perceived level of anxiety using a picture scale and the researcher's rating of the child's anxiety using the same scale. The posttest measures will include a second rating on the perceived anxiety scale by the children and on the same scale by the researchers. The children also will complete a 6-question coping skill measure and a 3-question measure evaluating their knowledge of the upcoming procedure. Results will assist music therapists in developing song-story protocol that prepares children for medical procedures.

6th Scholarship and Creative Arts Day

SCAD Presentations

By Department

History Panel of Presentations H-107

9:30 AM Kristallnacht and the Final Solution # 100

Presenter: Jason Halberstadt

Mentor: Dr. Brian Newsome

Moderator: Brian Newsome

Kristallnacht was a watershed in the evolution towards the Holocaust; representing a heightened wave of unchecked racial aggression, it illustrated the genocidal mentality of the Nazi regime, but was not indicative of a preconceived plan for mass extermination. A comprehensive examination of Kristallnacht must be situated in the historiographical context of the Functionalist and Intentionalist positions. Intentionalist historians, such as Daniel Jonah Goldhagen, use the events of Kristallnacht to support their thesis of a preconceived plan for the Holocaust rooted in "eliminationist anti-Semitism" that permeated the German population. This paper illustrates the weakness of this argument by cataloguing the evolution of German discrimination against Jewish people and examining the immediate causal factors of Kristallnacht, namely the deportation of Herschel Grynszpan's parents and Grynszpan's assassination of Ernst von Rath, a German diplomat in Paris. This paper also analyzes the role of the Nazi regime in orchestrating the pogrom and the reaction of the German people to the violence and wanton destruction. The utilization of primary sources enabled the examination of Jewish reactions to Kristallnacht and presented a poignant and comprehensive analysis that statistics and figures alone do not provide.

9:45 AM French Nuclear Technology in the Postwar Era # 101

Presenter: Tyler Eshelman

Mentor: Dr. Brian Newsome

Moderator: Brian Newsome

The development of French nuclear technology in the decades following World War Two resulted in a comparatively large nuclear energy infrastructure as well as a comprehensive nuclear deterrent (force de frappe). Building on the work of Gabrielle Hecht, this paper explores the motivations behind the rapid escalation of research, development, and implementation of distinctly French nuclear energy and weapons technology in the postwar era. Beyond the economic and strategic factors that encouraged French development of nuclear technology, France's nuclear program in the 1950's and 1960's can also be seen as an attempt to regain French dominance in a highly competitive technological field. With France's colonial fortunes declining, and with the experiences of defeat and collaboration fresh in the national memory, nuclear power offered France an opportunity to not only become a respected scientific power, but also assert a degree of independence within the American dominated NATO alliance. While the effectiveness of France's nuclear weapons was never tested, the economic benefits and positive effects on national identity from nuclear research stand as the chief measurements of success for France's nuclear program in the early decades of the Cold War.

History Paper Presentation H-107

10:00 AM Shifting Identities: Ernest Wampler and the Brethren Missionaries in China # 102

Presenter: Sarah Thomas

Mentor: Dr. David Kenley

Brethren missionaries were relative late-comers to China, first arriving in 1908, decades after other Protestant groups. The first group of volunteers consisted of only five missionaries. In missiology literature, Christian evangelists are often depicted as self-sacrificing martyrs. In scholarly literature, however, they are frequently described as cultural imperialists, possessing the "White Man's Burden" mindset to better the lives of "heathens" or "savages." While each of these descriptions may have some truth to them, neither addresses the sense of identity the missionaries themselves held. Ironically, many Brethren congregations opposed foreign missions, fearing they would radically change the unique aspect of Brethren doctrine and identity. In this paper, I investigate the ways in which missionary work in China altered the Brethren sense of identity. In particular, I will look at one individual: Ernest Wampler. Wampler spent many years in China and served in a variety of missionary roles. As such, his experience will serve to shed important light on the notion of Brethren, Christian, and American identity.

10:30 AM Beyond MAD: Reagan, SDI, and America's Mission in a Nuclear-Armed World # 103

Presenter: Tyler Eshelman

Mentors: Dr. David Brown, Dr. Robert C. Nation

Rather than strictly focusing on the technical or political implications of the Strategic Defense Initiative, this paper examines the role ideological and moral factors played in the promotion of SDI throughout the 1980's. The Reagan administration's emphasis on SDI, in spite of the high costs and technical difficulties associated with the program, reflected a desire to restore America's lost sense of security in the face of global nuclear war while also fulfilling America's role as an "exceptional" state through defying the accepted logic of Mutually Assured Destruction and developing a method of decisively ending the ICBM threat on a global scale. An analysis of the language used by Reagan and other public advocates of SDI, as well as the lofty goals set for the program itself, reinforce this notion that missile defense was viewed as far more than just another weapons technology by many of its most committed proponents. Additionally, the history of American Exceptionalism as a political and social phenomenon is also explored to lay context for the Reagan Administration's actions and rhetoric. Overall, this paper discusses the role of mission-minded thinking in Reagan's Cold War policymaking and the implications this had in the promotion of a program that was frequently the target of criticism on diplomatic, economic, and scientific levels.

6th Scholarship and Creative Arts Day

SCAD Presentations

By Department

Mathematical Sciences Poster Masters Atrium

8:00 AM Continued Fractions # 55
 Presenter: Maura Faherty Mentor: Dr. Leyla Batakci

This project is an investigation of continued fractions and their applications in mathematics.

8:00 AM Solutions to Challenging Math Problems VI # 56
 Presenters: Robert Graham, Claire Chambless, Alan Dyson, Julia Hodge, Jessica Lehr Mentor: Dr. Timothy McDevitt

This poster contains student solutions to problems posed in the Pi Mu Epsilon Journal. All solutions have been submitted for publication.

Mathematical Sciences Paper Presentation H-107

11:00 AM Mathematics and the Christian Faith: A Parallel Universe # 200
 Presenter: Emily Lehman Mentor: Dr. Bobette Thorsen

Mathematics is often believed to be a subject that dispels the existence of God because of its role in explaining much of our natural world. Stereotype or not, intelligence is often linked to disbelief in God. As a Christian and someone who favors Mathematics, this disturbs my spirit. I began questioning if my passion for math was compatible with my Christian faith. This has led to my discovery that Mathematics is, in fact, very compatible with faith in God. One of my favorite finds within my research is on the subject of infinity. I will discuss different kinds of infinity and focus in on computable numbers. We will learn that most numbers in the real number system cannot be described. Similarly, we can try to explain God using words like sovereign, all-knowing, loving, mighty, majestic, worthy, and holy, but when it comes down to it, these are words humans have created. Thus, our language is inadequate to wholly capture the greatness of God.

11:30 AM Elliptical Curve Cryptography # 201
 Presenter: Taryn Shank Mentors: Dr. Bobette Thorsen, Dr. Timothy McDevitt

Elliptic curve cryptography is an efficient method of public key cryptography that is very useful because it employs a much smaller key size than other public key methods, such as RSA. Elliptic curve cryptography keeps information that is being passed through computers safe from any potential security threats. The theory behind the method involves many different areas of mathematics including algebraic groups, finite fields, and number theory. I will talk about some of the mathematics involved such as the fact that the points on an elliptic curve form a group both over the reals and over a finite field. I will also explain how elliptical curve cryptography works in a real world setting.

11:45 AM Using Digital Roots to Outline a Winning Strategy for a Nim-Like Game # 202
 Presenter: Julia Hodge Mentor: Dr. Gabriela Sanchis

The digital root of a number is the single digit obtained by the recursive summation of the number's digits. For example the digital root of 32675 is 5 since $3+2+6+7+5=23$ and $2+3=5$. This relatively unknown operation has several useful applications and properties. For example, the digital root of a perfect cube is one, eight, or nine, and repeats in that order. The digital roots of the Fibonacci numbers also repeat in a sequence. These properties among many others will be explained in depth. One of the most interesting applications of the digital root operation involves a modified version of the traditional Nim game. The traditional Nim game consists of two players taking turns adding matchsticks to a common pile until a target number of matchsticks is reached. For example, each player might be allowed to add one or two matchsticks on his turn, and the goal might be to reach a total of 25 matchsticks so the player who contributes the 25th matchstick wins. In the modified game, instead of each player having the same choice each time (put down 1 or put down 2 matchsticks) a player's choices on each turn depend on his opponent's previous play. The modified game utilizes a single die with numbered faces to describe the choices allowed. Digital roots can be used to outline a winning strategy for this "Dice Game." Additionally, the implications of using dice with a different number of sides will be explored.

6th Scholarship and Creative Arts Day

SCAD Presentations

By Department

1:15 PM The Real (Chocolate) World of Mathematics: Applications in a Financial World # 320
Presenter: Alicia Jacobs Mentor: Dr. James Hughes

The use of Microsoft Excel in the corporate finance world is not a new development. Use of a Windows-based trade management program in conjunction with Excel-based calculations provides regular tracking of trade spending. In this instance, trade is defined as discounts or reimbursements paid to a customer in exchange for the creation of promotional sales events. Proper utilization of trade dollars has the ability to increase factory revenue, consumption levels, sales lifts, and overall ROI and profitability. Tedious tracking of the aforementioned metrics is essential in supporting and evaluating the efficiency of customer sales executives as they negotiate the creation of new promotions. Analysis of Hershey products can be conducted on multiple levels including brand, packtype, promotion tactic, and customer type. Correctly modeling promotional performance and updating forecasted trade accounts yield accurate predictions for the customer-sales executives as they negotiate, plan and execution promotions. Microsoft Excel provides tools to manage a hefty amount of ever-changing data for calculations and analysis. A financial analysis internship with The Hershey Company has provided an opportunity to analyze live financial data using statistical methods. This provides insight on trade account dollars for sales teams in a Fortune 500 confection company.

1:30 PM Strengths and Sortcomings of Lebesgue Integral # 321
Presenter: Alan Dyson Mentor: Dr. Leyla Batakci

The term "integrate" gets thrown around very loosely. In introductory calculus courses, we commonly assume that integrating a real-valued function f means partitioning the domain into an infinite set of points and summing up an infinite number of rectangles with the heights equal to the images of f . However, this technique relies on a number of assumptions that most students take for granted. Using only the strict definition of a function as a rule of assignment, one can create infinitely many functions that are not integrable under Riemann's method. Then how do we analyze the behavior of such functions? One way is to see if we can invoke Henri Lebesgue's measure theory and compute Lebesgue integrals. Although some functions still cannot be integrated under this method, we open our minds up to a whole new approach to integration. Interestingly enough, the functional difference between the two types of integrals is not as much different as you might expect. All bounded functions that are Riemann integrable are also Lebesgue integrable. Unfortunately, the converse is not necessarily true. If this really is the case, one might wonder why introductory calculus courses don't teach the Lebesgue integral before the Riemann integral. The main reason is that most of the functions studied in these courses are integrable under both methods, but the Riemann integral is more intuitive. In this presentation, we discuss the strengths and shortcomings of Lebesgue integral.

2:00 PM Doing Math While Waiting for Dinner # 322
Presenter: Ellen Lowy Mentor: Dr. Timothy McDevitt

I used Mathematica to build a graph connecting different peg configurations for a peg solitaire game. I used a shortest path algorithm to find if any solution exists to win the game from a given starting configuration.

Modern Languages - Japanese Panel of Presentations BLR (Steinman)

9:30 AM Delving into the Controversy of Fukushima: Exploring Asakawa's Claims about the Fukushima Nuclear Disaster # 120
Presenter: Nathan Caudill Mentor: Dr. Mahua Bhattacharya
Moderator: Dr. Mahua Bhattacharya

The Japanese nuclear disaster was a source of fallout in all meanings of the word. On one hand, the disaster was considered by some to be an inevitable consequence of the large earthquake and the resulting tsunami, combined with bad luck. On the other hand, the disaster was seen by others as inherently avoidable and essentially man-made. The presentation will examine both sides of the issue, paying special attention to portions of a work written by former Fukushima Daiichi Nuclear Power Plant technician Ryo Asakawa and translated from Japanese for the project.

9:45 AM Japan's Fishing Industry Post-3/11 # 121
Presenter: Matthew Frutchey Mentor: Dr. Mahua Bhattacharya
Moderator: Dr. Mahua Bhattacharya

The events of March 3rd, 2011, which consisted of a magnitude nine earthquake, an enormous tsunami, and radiation damage from the Fukushima nuclear power plant left the Tohoku region of Japan utterly devastated. The aftermath of the tri-disaster has also left the region paralyzed. The area plays a crucial role in Japan's fishing industry. However, as indicated by two articles written and chronicled by Hiroko Tabuchi of the New York Times and various others individuals, infrastructure damage to processing plants, docks, boats, etc., and radiation concerns have other nations and Japan's own citizens wondering if they will ever be able to recuperate. However, through translations on a database exclusively regarding the subject of Japan's resurgence and revival in the fishing industry, it becomes obvious that organizations, citizens, and overall generosity will give the island nation every reason to believe it can bounce back to achieve the same success or perhaps even surpass it.

By Department

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SCAD Presentations

By Department

8:00 AM Responsiveness Study of the Hand Assessment Tool

58

Presenter: Andrew Mariani

Mentor: Dr. Daniel Panchik

The importance of outcome measures in healthcare is well established. It is important to use control methods, including activity limitation measurements to document accountability, to offer cost effective service, and to improve the quality of care. The Hand Assessment Tool(HAT) is a self-administered activity limitation measurement tool for individuals with hand and wrist injuries. In a previous study the HAT correlated well with the DASH and SF12 physical score and proved to be an internally consistent and reliable instrument for evaluation of activity limitations for individuals who sustained wrist or hand injury J HAND THER 2008. The objective of this study is to further validate the HAT by investigating the responsiveness of the instrument with patient who undergone LRTI. Responsiveness will be analyzed by looking at Standard Test Mean and Effect Size from initial pre surgery baseline to 6 month follow-up. Preliminary data will be presented at this time.

8:00 AM Exploring Inclusion in the occupation of Dance: A Needs Assessment

59

Presenter: Kimberly Welker

Mentor: Dr. Kerrie Hample

The current literature on the benefits of inclusion of children with intellectual disabilities in extracurricular activities has yielded mixed results. Inclusion has enabled improvement of children with disabilities' skills while facilitating concepts of acceptance and open mindedness among typically developing children in these groups. However, research has also suggested that the self-esteem of children with disabilities often decreases when they are among higher functioning peers, despite the noted increase in skill level. Due to this disparity and limited research, my research focuses on the occupation of dance by exploring the opinions of dance teachers on the topic of including children with disabilities in their dance classes. In doing so, my project will (1.) Assess if teachers feel adequately prepared to include children with disabilities in their regular dance programs, (2.) Assess if there is a need for a program specifically designed for children with disabilities in this geographic area, and (3.) Gain insight on the willingness of dance teachers to include children with disabilities in their classes. A convenience sample was used by e-mailing an online survey via survey monkey to dance teachers in York, Dauphin, and Lancaster counties whose e-mail addresses could be retrieved. Experience teaching children with disabilities, level of preparedness to teach the population of interest, willingness to learn teaching strategies, and demographic information were assessed among participants through the survey questions. Pending results will be shared via a poster presentation and a paper to be displayed in the OT department.

8:00 AM Disaster Response: Meeting the Needs of Veterans

60

Presenter: Sarah Creme

Mentor: Dr. Tamera Humbert

Whether it is response to a natural or manmade disaster, a community will progress through a series of stages. These stages include alerting essential personal, protecting infrastructures and caring for the community members (Federal Emergency Management Agency, 2010). Once the immediate threat of the disaster is resolved, a community will begin the recovery process. Select organizations have defined their role in disaster response and recovery, working together to help the community (The Disaster Center, 2011). Some of these organizations have begun to utilize the use of veterans as disaster response volunteers. However, there is limited information as to the strengths and needs of incorporating veterans into disaster response and recovery. The objective of this study was to present the benefits as well as special considerations of involving veterans in disaster response.

8:00 AM Addressing Driving within Occupational Therapy Practice—Connecting the Dots Between Generalists and Specialists

61

Presenter: Megan DiBernardino

Mentor: Ms. Ann Marie Potter

In the United States, driving symbolizes independence; however, older adults—due to disease, injury, or even the natural aging process—may need to cease driving for safety reasons. Occupational therapy practitioners are trained with a unique skill set that enables them to understand the occupation of driving and provide interventions to further evaluate driving on differing levels depending on degree of training received in this area. Although all occupational therapy practitioners are equipped with the knowledge set to address driving, many general occupational therapy practitioners are not including it in practice for various reasons. With this being said, it is vital to occupational therapy care—which emphasizes holistic, client-centered treatment—that all practitioners assess driving within their respective degree of training. This poster presentation will provide an overview of the current occupational therapy practice in driving. Based on an analysis of current literature and consultation with a master clinician of driving, a decision tree for general clinicians has been developed. This decision tree provides a way to look at the impairments and underlying performance skills necessary for driving. The decision tree will be part of an occupational therapy driving app. Mock ups of the app will be included in the poster.

6th Scholarship and Creative Arts Day

SCAD Presentations

By Department

8:00 AM

Funding for therapeutic riding services: a service project

62

Presenter:

Erin Callanan

Mentor: Ms. Christine
Achenbach

Research has confirmed various benefits of the use of equine-assisted therapies namely hippotherapy and therapeutic riding, as an intervention for various disorders and disabilities. Some commonly noted populations that may benefit include autism, cerebral palsy, spina bifida, sensory modulation disorder, intellectual disabilities, communication disorders, CVA, developmental delays, Down syndrome, language disabilities, and multiple sclerosis. During therapeutic riding, a certified instructor focuses on teaching an individual with a disability how to ride and care for a horse, while with hippotherapy an occupational, physical or speech therapist leads a therapy session on a horse. Some benefits of this multi-sensory therapy include improvements in balance, muscle strength, and range of motion; increased motivation, reduction of stress and improved self-esteem; and increased independence in self-care skills. A main concern for many families is how to pay for these therapies. Hippotherapy is known to be covered partially if the families' insurance covers out-of-network therapies, but for therapeutic, many families must pay out of pocket. Financial strain can be an issue for families of children with disabilities and deters many from exploring alternate treatment such as therapeutic riding for their children. As a service project, I am exploring options for families on how to receive public or private funding for therapeutic riding. The information will be organized into a pamphlet and will include resources for the facility such as grants to aid in providing children with facility-based scholarships, and the "waiver" program as means of getting funds for this less mainstream therapy. The brochures will be disseminated to five local therapeutic riding agencies to aid in their search of funding for their riders.

Occupational Therapy

Paper Presentation

BLR (Steinman)

12:00 PM

Is the War Really Over? PTSD's Aftermath

245

Presenters:

Joanna Davis, Emalee Hartmann

Mentors: Ms. Debbie
Waltermire, Dr. Aaron Cecal

The purpose of this session is to educate and inform others about post- traumatic stress disorder (PTSD) and its occupational effects on military veterans from Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF). We will examine the neurobiological characteristics causing the behavioral and psychological symptoms of the disorder. The relation between PTSD and traumatic brain injury will be discussed, as both are currently the most common injuries of this war. The effects of PTSD on the individual, family, and society will be addressed in the occupational domains of work, leisure, and self -care. With this knowledge, the functional limitations can be analyzed from an occupation-based perspective according to the Occupational Therapy Practice Framework II. By utilizing literature from a wide variety of reliable sources, we will synthesize cutting edge research, therapy techniques, and resources for health professionals in most settings. Our objectives for this presentation include: * increasing the understanding of PTSD and its effects on the primary domains of occupation *enhancing awareness of this disorder in OEF/OIF war veterans *providing valuable knowledge and resources for professionals to utilize in practice

Political Science

Paper Presentation

H-211

11:45 AM

Electoral College Change in Pennsylvania and the Impact on Presidential Elections

223

Presenter:

Nicholas Clemens

Mentor: Dr. Kyle Kopko

Pennsylvania is in the midst of potential change to the way presidential elections are conducted. Since tangible plans to change the way Pennsylvania allocates its electoral votes were introduced in 2011 by Pennsylvania Senate leadership, debate has ensued concerning what would result from changing the current winner-take-all method. The options for change include moving to the district plan, the proportional plan, or the national popular vote method. Many changes could result from any of these plans, but would there be a change in the overall outcome of the presidential election? What would this change mean for presidential politics in Pennsylvania? I argue that changing to the district plan would not change the winner of the presidential election. I also argue that a change to the district plan would also decrease Pennsylvania's electoral clout. Election results were collected by congressional district between 1972 and 2012 in order to analyze what the result would have been under the district plan. This compilation of past elections supports the argument that the same person would have been elected president regardless of which system was in place in Pennsylvania at the time. Had the district plan been in place, each party would have perceived there to be less "swing" electoral votes to be disputed. These results demonstrate that changes to Pennsylvania's electoral system would impact campaign strategy to the point that Pennsylvania would be less significant in a presidential election.

6th Scholarship and Creative Arts Day

SCAD Presentations

By Department

12:00 PM Human Rights versus Religious Rights: Examining Circumcision from a Legal Perspective # 224

Presenter: Rustin Dudley

Mentor: Dr. Kyle Kopko

In the last year, the Western world has seen a surprising number of governments debating the legality of circumcision of infant males. In June, Germany banned the act calling it "bodily harm." And in July a circumcision ban was struck from the ballot in San Francisco. Given that the practice is so engrained in contemporary society, these events have left many proponents of circumcision confused and angry. Opponents of circumcision, on the other hand, condemn supporters saying that it is a human rights violation. However, most individuals do not understand why, now, there is so much controversy surrounding the act. Due to the recent controversy, a heated debate has started, and it has led to a discussion about female genital mutilation as well. Many individuals are beginning to question if enacting anti-FGM laws, but none against circumcision, constitutes unequal treatment of the sexes. Because of the United States' value of religious freedom, this issue will not be resolved in the near future. But, by educating individuals about both sides of this topic, people will be better able to discern what they feel should be done, which will help lead to a resolution. The issue is sure to result in a lengthy legal battle. Ultimately, religious freedom will be the argument of proponents, and in order for circumcision opponents to prevail, they will have to find a reasonable argument to justify the suppression of this right.

12:15 PM The Impact of Electoral Reform on Female Political Representation in Sub-Saharan Africa # 225

Presenter: Julia Ward

Mentor: Dr. Kyle Kopko

The issue of female political representation is a significant concern of international importance. In many countries around the world, different types of gender quotas have been implemented in order to gain a more expansive and encompassing role for women in politics. However, there is conflicting research on how important the relationship between electoral systems and levels of female political representation is, specifically in sub-Saharan African countries with gender quotas. Some research claims that the sub-Saharan African region differs from the rest of the world in the sense that the type of electoral system in the country does not have a significant impact on the levels of female political representation. However, there is other research that claims gender quotas are much more successful in proportional representation systems than in plurality systems. The objective of my research is to determine how influential the type of electoral system is on levels of female political representation in sub-Saharan African countries with gender quotas. My research will also specifically assess the impact of changes in electoral structure by analyzing a proposed transition in Namibia from a proportional representation system to a ward system.

Political Science Panel of Presentations

1:15 PM Flowers Amongst the Stones: An analysis of the International Security Assistance Force (ISAF) and United States Agency for International Development (USAID) regarding the progress for education in Afghanistan # 340

Presenter: Christine Nagle

Mentors: Dr. Oya Ozkanca, Dr. Rachel Finley-Bowman
Moderator: Dr. Oya Ozkanca

The problems associated with the lack of a functioning national educational system in Afghanistan are a result of the lack of security and continued attacks on schools. The concern over the children's well-being has understandably prevented many parents from sending their children to school. Additionally, debilitating poverty in many of the nation's provinces affects students' ability to attend schools. Two organizations that are working to improve the security and socioeconomic status of Afghanistan include the International Security Assistance Force (ISAF) and United States Agency for International Development (USAID). This report seeks to analyze the challenges faced by these two organizations and the progress that has been made in recent years to improve educational opportunities for the children of Afghanistan.

1:30 PM An Analysis of the Integration and Assimilation of Zainichi Koreans in Japan # 341

Presenter: Alivia Miller

Mentors: Dr. Oya Ozkanca, Dr. Nobuaki Takahashi
Moderator: Oya Ozkanca

This paper focuses on the current progress that has been made in Japan on assimilating Koreans and Korean decent resident foreigners into society. It will present information on the history between Korea and Japan for a more in-depth understanding of the issue. It will also analyze the education system, the perspectives of Japanese nationals, Koreans, businesses, and the relationship between Japan and South Korea as well as Japan and North Korea. Findings suggest that Japan has come a long way in accepting this ethnic group into the society. However, there are still many issues that need to be addressed in the progress towards a more multicultural nation. The paper presents a number of factors that hinder the progress in this area and concludes with recommendations to improve the current status of Zainichi Koreans in Japan.

6th Scholarship and Creative Arts Day

SCAD Presentations

By Department

1:45 PM The Latin American Path To Drug Regulation: How to Engage in a Harm-Reduction Approach in Latin America # 342

Presenter: Adriano de Oliveira

Mentor: Dr. Oya Ozkanca
Moderator: Oya Ozkanca

This research presents the consequences of the war on drugs, particularly in Latin America, and argues that it has indeed failed. The relationship between Latin American countries and the United States is central to this issue. At present, Latin American countries try to come up with alternatives to this approach. Nevertheless, at the federal level, the United States present some resistance to decriminalization. This paper analyzes different counter-drugs trafficking methods and makes recommendations on how to more effectively deal with narco-trafficking.

2:00 PM Transforming the Sudanese Conflict: A Framework for Peace # 343

Presenter: Nicholas Clemens

Mentors: Dr. Oya Ozkanca, Dr. E. Fletcher McClellan
Moderator: Oya Ozkanca

Modern day Sudan and the Republic of South Sudan are engulfed in a conflict, the roots of which span back to before the founding of a Sudanese state. Although the current state boundaries are reminiscent of the days when Egypt and Great Britain governed the northern and southern regions, respectively, conflict resolution remains inconclusive. Progress has been made but discrepancies over sovereignty remain because of the desire for oil and the lack of trust that characterizes north south Sudanese relations. Resolution may be an ideal cause, but transformation of the conflict and the actors is the only way to find immediate solutions and address the immediate relationships and structure of the conflict. Conflict transformation is a way to enable actors to better understand the viewpoints of other actors while searching for a common ground that moves the conflict from zero-sum, win-lose status towards more positive outcomes. The conflict analysis framework, developed by John Paul Lederach, is ideal for increasing understanding. Using this framework, this article analyzes the needs, interests and the positions of the actors in the Sudanese conflict. These actors include primary: Sudan and South Sudan; secondary: China, Uganda, and Chad; and intervening actors: United States and African Union. The thesis concludes with recommendations for the solution of the conflict.

2:15 PM The Gendered Effects of Trade Liberalization on Literacy in Sub-Saharan Africa # 344

Presenter: Jillian Casey

Mentors: Dr. Oya Ozkanca, Dr. E. Fletcher McClellan
Moderator: Oya Ozkanca

As developing nations continue to become integrated into world markets, trade liberalization and globalization have created institutional changes for developing nations. These large institutional changes may affect women and their education and Sub-Saharan Africa (SSA) may be different from the rest of the world when it comes to these effects. The objective of my research is to (1) analyze how trade liberalization is affecting women's education in SSA compared to the effects of trade liberalization in other developing nations around the world; (2) analyze how these effects have changed over the last ten years; and (3) find what factors contribute to this relationship. I will do this by analyzing the relationship between trade openness and the literacy differentials between men and women in SSA countries as well as select non-SSA countries. I hypothesize that SSA is different from the rest of developing nations and will show a positive relationship between trade openness and literacy differential, indicating that trade openness is negatively affecting women's education in SSA. I also expect to find a smaller positive relationship between trade openness and literacy inequality in 2010 than in 2000. I will also analyze what factors could be contributing to this hypothesized negative relationship, including other economic factors, religion, and social and gender indexes.

2:30 PM Mali: Al Qaeda's Next Home? # 345

Presenter: Paul Whitman

Mentor: Dr. Oya Ozkanca
Moderator: Oya Ozkanca

This paper focuses on the recent political developments in Mali, a large country in northwestern Africa. Mali has recently gone through another civil war, which might possibly extend to neighboring countries. Two groups, the Tuareg's and the Malian government, have had conflicting views on land and governmental issues. This paper first analyzes the history of Mali and then discusses how Mali might become Al Qaeda's new home in Africa for their network to expand. Lastly, the paper explores why Mali is important to United States' foreign policy interests. It is of vital importance that the conflict in Mali is handled effectively to prevent an outbreak of violence across the continent. The paper concludes with policy projections on the future of the conflict in Mali.

6th Scholarship and Creative Arts Day

SCAD Presentations

By Department

Psychology Poster Masters Atrium

1:15 PM Musicianship improves recall of linguistic details during audiovisual task # 420
Presenter: Katherine Cotter Mentor: Dr. Catherine Lemley

Research has revealed the musicians are able to more accurately identify differences in tonal stimuli (Bigand, McAdams, & Foret, 2000) and syllabic stimuli (Spajdel, Jariabkova, & Riecanaky, 2007). However, it has not been investigated as to whether this advantage extends to language. The present study investigates whether attentional differences between musicians and nonmusicians extend beyond the use of tonal stimuli. **Method** Undergraduate participants (23 musicians and 21 nonmusicians) completed three conditions. In the visual condition, participants completed a visual cancellation task (searching for a target letter and crossing it out) for one minute. In the auditory condition, participants dichotically listened to two stories and were asked to identify verb tense errors and recall detail about the stories. In the audiovisual condition, participants listened to two stories while concurrently completing a cancellation task. **Results** ANOVA revealed a significant interaction between musical expertise and amount of detail recalled (musician vs. nonmusician; single vs. dual task), $F(1, 42) = 4.250, p < .05$. **Discussion** The present findings suggest that musicians are able to report more detail than nonmusicians when presented with two auditory and one visual stream of information. One implication is that musical training may play a role in the division of attention in these modalities. **References** Bigand, E., McAdams, S. & Foret, S. (2000). Divided attention in music. *International Journal of Psychology*, 35 (6), 270-278. Spajdel, M., Jariabkova, K. & Riecanaky, I. (2007). The influence of musical experience on lateralization of auditory processing. *Laterality*, 12 (6), 487-499.

1:15 PM Mind Wandering Increased by In-text Citations of an APA Style Paper # 421
Presenter: Ian Hamilton Mentor: Dr. Catherine Lemley

Previous research has indicated that superfluous information in written material increased the frequency of readers' mind wandering. Moreover, mind wandering has been linked to decreased reading comprehension. A physiological indicator of mind wandering is an increase in eye blinking. The current study investigated whether the presence of American Psychological Association (APA) in-text citations affected the frequency of mind wandering. Mind wandering was measured through self-report and frequency of blinking. Results of this study revealed that participants who read a sample article with APA citations had significantly higher mind wandering frequency compared to participants who read the same article with the in-text citations removed. Additionally participants' blinking frequency was higher when they reported mind wandering compared to being on task.

1:15 PM Does Smiling Matter? The effect of smiling on perceived facial attractiveness in the periphery # 422
Presenter: Jessica Holden Mentor: Dr. Catherine Lemley

This study was conducted to better understand the effect that smiling has on perceiving facial attractiveness, when faces appear in the periphery. Guo, Liu, and Roebuck (2011) reported that facial attractiveness can be assessed even with peripheral vision. Little research, however, has been conducted to address the extent to which smiling influences attractiveness. Therefore, participants in this study were asked to rate the attractiveness of twenty different male and female faces, each shown once smiling and once with a neutral expression. The faces varied in levels of attractiveness. Participants rated the attractiveness of faces presented on a computer screen ten degrees from their central vision similar to Guo et al. (engaging their peripheral vision). The results reveal that smiling faces were rated significantly more attractive than the same face when it was not smiling, regardless of general attractiveness. The interesting finding was that smiling increases the perception of attractiveness even when faces are presented in the periphery.

1:15 PM The Effects of Stress and Anxiety on Prospective Memory # 423
Presenter: Caitlin Cecco Mentor: Dr. Michael Roy

Many factors can influence prospective memory, the ability to remember to complete future tasks. It has been found in research that shorter periods of time can help with better remembering, and those with higher stress and anxiety, perform at a lower proficiency (Harris & Menzies, 1999). The purpose of this study was to examine the relationship between stress, anxiety, depression, and prospective memory. Thirty-nine Elizabethtown College students participated in the study. Participants were read instructions for the prospective memory task that would be completed later in the session. After the instructions, they completed a working memory task. Participants were then given the Depression Anxiety Stress Scale, testing their current mood. Finally, they completed the prospective memory task. The task consisted of a list of twenty-four words selected from several categories with four target words. The list was read aloud, and the student wrote down an associated word. When one of the target words was read, the participant had to remember to place a cross next to the corresponding number. The scores on the Working Memory task and the Depression Anxiety Stress Scale predicted participants' ability on the prospective memory task. Anxiety, stress and working memory were found to be accurate predictors of prospective memory. While anxiety hindered performance for prospective memory, feelings of stress actually helped performance. Depression level was not related to prospective memory task. It may be that feeling of stress-increased vigilance, which, in turn, increased ability to remember to perform future tasks.

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SCAD Presentations

By Department

1:15 PM The Effects of Spoiled vs. Unspoiled Stories on Video Viewing # 424
Presenter: Mary Settle Mentor: Dr. Michael Roy

Leavitt and Christenfeld's (2011) study suggests that people's ability to re-read stories for enjoyment indicates that the psychological experience of suspense is not critical to enjoyment and might even impair pleasure by distracting attention from a story's relevant details. They reason that readers enjoy spoilers because they allow for better organization of developments, anticipation of the implications of events, and because they resolve ambiguities that occur in the course of reading. Here we examined the impact spoiling stories has on video viewing by giving away surprise endings. It was unknown if a preference for spoiled stories would apply to video viewing. Thirty-nine students took part in the study. They were randomly assigned to an unspoiled condition or a spoiled condition, giving away the surprise ending. After the video was viewed, a questionnaire was given, assessing the participants' experiences, including the amount of anticipation, interest, enjoyment, and positive and negative feeling they felt. The two groups differed significantly in their feelings toward the video, with those in the unspoiled condition having more positive feeling and less negative feeling than those in the spoiled condition. However, despite the difference in affective experience for spoiled and unspoiled conditions, there was no significant change in the amount of interest, enjoyment, or anticipation felt by participants. Our findings show that viewers may prefer unspoiled stories because participants in the unspoiled condition reported greater positive feeling and less negative feeling toward the video than those in the spoiled condition.

1:15 PM Earworms, Rumination and Working Memory # 425
Presenter: Shelby Samartino Mentor: Dr. Michael Roy

A common, yet under-studied form of mental imagery is referred to as the 'earworm'—also referred to as 'involuntary musical imagery', or INMIs (Liikkanen, 2008) or 'sticky music' (Sacks, 2007). An earworm is a song that gets 'stuck' and plays repeatedly in one's head. They are known for their involuntary nature and difficulty in removing from the mind. Rumination is another type of involuntary cognitive behavior, in which we obsessive over past negative moods and events. This tendency is most profoundly characterized by its spontaneity, meaning the individual does not actively retrieve these thoughts. There are two distinct types of rumination: brooding and reflective rumination. The current study examined the occurrence of earworms and the tendency to ruminate in undergraduate students. Having a song stuck in your head and reflecting back on negative moods both involve the use of memory, and thus, it was also of interest to observe how working memory relates to both earworms and rumination. Results indicated that those who engage in the brooding style of rumination are more likely to have hindered performance on a task because of earworms, and those with more working memory are less likely to engage in reflective rumination. The current findings suggest that those who ruminate may have difficulty staying on task when exposed to music beforehand. They also indicate that individuals who reflectively ruminate may have less working memory, leading to less cognitive control.

1:15 PM An outside perspective: The effect of 3rd person imagery on time estimation # 426
Presenter: Vicente Torres Mentor: Dr. Michael Roy

Buehler, Griffin, Lam, & Deslauriers (2012) explored third person imagery and its effects on estimated time of task completion. They found that people who adopted a third person perspective compared to a first person perspective when estimating task completion of a long task tended to overestimate rather than underestimate. The current study explored whether this intervention was also helpful for short, uninterrupted tasks. Participants were brought into the lab one by one and randomly placed into either a control condition or experimental. Participants in the control group were told that they would be asked to count 500 sheets of paper and were asked to estimate how long they thought it would take to count 500 sheets of paper. Participants in the experimental group were given instructions for adopting a third person perspective. The estimated time for both groups was recorded. After counting all sheets of paper the actual counting time was recorded. Participants greatly underestimated how long it would take them to count 500 sheets of paper. Participants in the experimental group were given instructions to think about their future task from a third person perspective which made no difference when estimating how long they thought the task would take to complete. This is significant because Buehler, Griffin, Lam & Deslauriers (2012) found that third person imagery led participants to overestimate task completion time for long tasks. This study discovered that it may only work for long tasks, and not short, uninterrupted tasks.

Religious Studies Panel of Presentations H-213

9:30 AM From The Boy Who Lived to The Flaw in the Plan: Christian Symbolism and Imagery in the Harry Potter Series # 130
Presenter: Kelsey Walck Mentor: Dr. Jeffery Long
Moderator: Christina Bucher

The first *Harry Potter* novel, released in 1997, launched a phenomenon that would spread across the globe. Touted as one of the best fantasy series of this age, Harry nevertheless began to draw criticism almost from the moment of his introduction to the world. Some of the strongest voices speaking disapproval arose in the Christian community; many individuals saw in Harry a gateway to the occult that would draw children down a dangerous spiritual path and lead them to abandon their Christian upbringing in favor of modern-day witchcraft. These critics, however, failed to see the rich tapestry J.K. Rowling was weaving as she incorporated numerous Christian themes, values, and imagery into her seven novels. Contrary to some popular belief, Rowling was writing novels compatible with Christianity, a septet of stories that would enrich the Christian life and introduce a new generation to the story of Christ, his sacrificial love, and his message through the eyes of a scrawny boy with untidy black hair and a lightning bolt scar.

6th Scholarship and Creative Arts Day

SCAD Presentations

By Department

9:45 AM **Saving the Devil: Mercy, Forgiveness and Redemption in Horror Television** # 131

Presenter: Rachael McQuiggan

Mentor: Dr. Jeffery Long
Moderator: Christina Bucher

Humanity has long been fascinated with monsters, demons, and the more frightening side of life. In many ways, the horror genre of television takes these captivating horrors and uses them to teach humanity about itself. One variation of this exploration is the ways in which horror television portrays and understands the concepts of mercy, forgiveness, redemption, and justice, and how those understandings compare to religious understandings. Focusing on five programs; *Buffy the Vampire Slayer*, *Angel the Series*, *American Horror Story: Murder House*, *Supernatural*, and *Being Human* (U.K), and the Judeo-Christian and Indic traditions, this explores how characters go about seeking redemption and forgiveness on both a personal and cosmic level and how that relates to the religious traditional understanding.

10:15 AM **Children of God: Jesus' Acts of Shame and His Teachings of Peace** # 133

Presenter: Angela Wilt

Mentor: Dr. Michael Long
Moderator: Christina Bucher

Jesus practiced peace and called his followers to do the same. He also encouraged them to shame their oppressors so they would change their values and behavior. According to Matthew 5:39-41, for example, Jesus instructed his followers to turn their cheeks, surrender their cloaks, and go the extra mile in order to shame their oppressors into ending their oppression. But shame, as we now know, can actually trigger violent actions. Scholar James Gilligan has found that most violent crimes occur because aggressors felt a deep sense of disrespect and shame. Using Gilligan's work on shame, along with liberation theology's spiral of violence theory, my paper will argue that Jesus' calls for shaming undermined his practice of peacemaking.

11:00 AM **Imagining the Ontological Pathways Between God and Humanity: A Synthesis of Hebrew, Greek, and Christian Thought in Relation to Exodus 3:14** # 260

Presenter: Jessica Oliver

Mentors: Dr. Christina Bucher,
Dr. Suzanne Webster Roberson
Moderator: Christina Bucher

The Western philosophic tradition blossomed from the original and effectual synthesis, in Christianity, of the Greek philosophic and Hebrew biblical traditions. In order to gain a proper understanding of the flowers and fruits of the Western tradition, the present study traces the path of its development back to a definitive moment within the Hebrew Scriptures; namely, Exodus 3:14, wherein God responds to Moses' request for God's name by saying, " ?ehyeh asher ?ehyeh" (traditionally translated as "I am who I am"; or "I am that I am"). Because this verse has been central to much philosophical speculation as to the ontological nature of God, it is important to derive an ontological conception of God from the Hebrew biblical tradition, with a special focus on Exodus 3:14. After ontological possibilities are set forth, Philo is discussed as a key representative point of convergence between the Hebrew and Greek traditions within the Jewish branch—one who had a tremendous influence on Christianity. Finally, turning to the Christian tradition, the project examines the philosophy of Samuel Taylor Coleridge, as expressed in his *Biographia Literaria*. Coleridge understood Exodus 3:14 as a revelation from God that related not only to God's "absolute being," but also to "the fundamental truth of all philosophy." The final purpose of this current study is to determine whether the unique ontological conceptions of God flowing from both the biblical and philosophical lines, can, without losing anything essential, become harmonized into a meaningful whole.

11:30 AM **Looking East: How Asian Religious Practices and Understanding Can Inform Current Christian Contemplative Life** # 261

Presenter: Matthew Doeing

Mentor: Dr. Jeffery Long
Moderator: Christina Bucher

Throughout the past century there has been an influx of spiritualism from East to West. For some Christians, this has in part contributed to a recovery of their own spiritual tradition and been a basis for productive interreligious dialogue and learning. The purpose of this paper is to delve into the ways in which Asian religious traditions and practices, specifically the Hindu and Buddhist traditions, have been able to inform and parallel Christian contemplative life. In doing this this paper shows the current state of Christianity from a viewpoint concerning meditative practices, mystical experiences, and other phenomenon related to the contemplative realm of Christian life, as well as shows some of the history of contemplative Christianity and how it is now being recovered. Furthermore, this paper looks at and analyzes the ideas of modern day Christian contemplatives who have had meaningful interactions with eastern traditions, including Thomas Merton, Bede Griffiths, John Main, and Anthony De Mello, among others. The purpose of this is to show how Eastern ideas have been incorporated or have inspired a better Christian contemplative understanding. Also of interest will be an in depth exploration of the compatibility of Asian practices with Christian theological beliefs. In addition, different forms of contemplative prayer are discussed, such as Centering Prayer and Christian prayer with a mantra, and their parallels with the eastern traditions. Finally the paper enters into a discussion on how interreligious experience within the contemplative aspects of faith can lead to increased learning and religious insight.

6th Scholarship and Creative Arts Day

SCAD Presentations

By Department

12:00 PM **Beyond Worship Wars: How a Look at Fundamental Christian Beliefs Can Ease Musical Conflict in Protestant Congregations** # 262

Presenter: Erinn Soltys

Mentors: The Rev. Tracy Sadd,
Dr. Justin Badgerow
Moderator: Christina Bucher

"Worship wars," a well-known term in Protestant churches today, refers to conflicts in opinion between traditional and contemporary musical worship styles in different congregations (broad generalizations, to be sure). Why does this conflict exist? This old versus new conflict is not new to us, but to fully answer this question it is important to look at how we define worship. A glance at the fundamental elements of the Christian faith, namely belief in the life, death, and resurrection of Jesus Christ, sheds light on what we mean when we use the term "worship." Furthermore, we find biblical clues to the purpose of communal worship that differs from that of individual worship. This paper examines Protestant congregational worship, both its theology and actual music-making, in light of Christianity's central premise, giving special attention to the biblical focus on community. An overview is given of how we define music and what influences our definitions, as well a brief explanation of Christian doctrine and how it applies to music in general. Biblical and theological sources are examined to give a more complete picture of music, specifically within congregational worship. On a pragmatic level, examples of congregations that are creatively addressing or even transcending "worship wars" will be described in terms of theology and music. Taking into account the aforementioned Christian belief and purpose of worship, practical conclusions and musical suggestions are given in regards to participating in congregational worship.

Sociology and Anthropology **Paper Presentation** **H-211**

8:00 AM **The New American Politic: The Effects of a Changing Electorate on the 2012 Presidential Election** # 20

Presenter: Suzanne Laucks

Mentor: Dr. Conrad Kanagy

Previous research suggests that voter choice in presidential elections can be influenced by a variety of factors. The current research will examine the effects of religious preference, race, and sex on intended voter choice in the 2012 presidential election based on changes taking place among various minority groups: the voting patterns among religious "nones," Latino voters, and women voters. This research will also look into the interactions among these variables to see how, or if, they are influenced by one another. Level of education will be used as a control variable. There are five hypotheses: religious "nones" will be more likely to vote for Barack Obama in the 2012 presidential election than religiously affiliated individuals; Latino voters will be more likely to vote for Barack Obama than white voters; female voters will be more likely to vote for Barack Obama than will male voters; Latino Catholic voters and Latino religious "none" voters will be more likely to vote for Barack Obama than will Latino Protestant voters; and women voters will be more likely than male voters to vote for Barack Obama regardless of religion and ethnicity. The data for this project are from the Gallup News Service Poll conducted on June 7-10, 2012. The sample size was 890 respondents.

8:30 AM **What is the Ultimate Experience? An Examination of the Effects of Sex and Cohort Generation on Customer Satisfaction and Tourism Preference** # 21

Presenter: Erin Bixler

Mentor: Dr. Michele Lee
Kozimor-King

On June 3, 2011 the small town of Columbia, Pennsylvania, located in Lancaster County, welcomed its newest visitors' attraction. The Turkey Hill Experience (THE) chose Columbia because the town was home to the dairy's first milk delivery route. THE is a 26,000 square foot attraction in a 110,000 square foot building that was first constructed in 1889 and was originally home to the Ashley & Bailey's Silk Mill. Since then, the building has been transformed, to welcome tourists from all over the world. Lancaster County has become a popular place for tourists to visit. In the first year that THE was open, June 3, 2011 to June 2, 2012, they welcomed 104,742 tourists. Previous research has examined the effects of sex and cohort generation on customer satisfaction and tourism preference. THE combines a new type of tourism referred to as postmodern tourism combined with a more traditional style called heritage tourism. This Honors in the Discipline (Sociology/Anthropology) thesis has three learning outcomes: (1) to become involved with a research based service-learning project; (2) to provide the Turkey Hill Experience with information about customers' opinions, views, interests in the exhibits, and the overall experience of their visit; and (3) to provide an experiential learning opportunity. The data for this study will be obtained from a survey distributed to customers visiting THE between March 1 and April 1, 2013. Results from this study will be presented. These findings will be useful to tourist destinations, those interested in evaluative research, and specifically THE.

6th Scholarship and Creative Arts Day

SCAD Presentations

By Department

9:30 AM **Mentoring Blue Jays: Evaluating the Effectiveness of a Faculty Mentor Program** # 110

Presenter: Lindsey Cooper

Mentor: Dr. Michele Lee
Kozimor-King

Within the past year, the National Collegiate Athletic Association (NCAA) has raised the academic standards and expectations for student-athletes within all of the athletic divisions. With a greater emphasis being placed on academics and the challenges student-athletes face on a daily basis, the NCAA is encouraging institutions to implement a mentoring program that supports the financial, educational, health and safety needs, and personal development of student-athletes. In response to the NCAA's recommendations, Elizabethtown College established its first Faculty Mentoring program for student athletes during the 2011-12 academic year. There are two main goals for this Honors in the Discipline (Sociology/Anthropology) project: (1) To provide the Elizabethtown College Athletic Department with assessment data examining the newly established Faculty Mentoring Program. This service-learning research based project will examine how effectively the new program fulfills the goals and expectations identified. In addition, views of athletic coaches and student-athletes on the athletic teams with mentors will be presented and recommendations for future programming will be provided; (2) To examine the satisfaction of student-athletes and faculty with the balance and integration of academics and athletics at Elizabethtown College. Issues such as workload, expectations, challenges, and levels of support will be explored. Furthermore, this research will examine the impact of the Faculty Mentoring Program on the knowledge, satisfaction, and perceived balance of the student-athletes and faculty. The data for this research will be obtained through the use of mixed methods research including focus groups and survey methodology. The findings of the study will be presented.

10:00 AM **Campus Warming? Examining Student Perceptions of Campus Climate and Diversity at Elizabethtown College** # 111

Presenter: Sarah Kittle

Mentor: Dr. Michele Lee
Kozimor-King

There has recently been a stronger push by institutions of higher education to increase racial and ethnic diversity on college campuses. Previous research has found that a positive campus racial climate can help improve the qualities and skills that students need to be successful after college. Increasing diversity on campus, however, does not always benefit racial and ethnic minority students, as they tend to report experiencing more harassment, discrimination, and a more hostile campus climate than white students. This research investigates student perceptions of campus climate and diversity at Elizabethtown College. The goal of this research is to determine how the increase in diversity is perceived by first-year and senior students and if the efforts to increase diversity is creating a positive campus climate for all students. In addition, the effects of class standing, race/ethnicity, and demographics of home residence will be examined to see how these variables affect perceptions of campus climate and diversity. The data for this research will be obtained through the use of survey methodology distributed to a sample of first-year and senior students at Elizabethtown College. Preliminary results of the study will be presented.

Sociology and Anthropology Panel of Presentations H-213

10:00 AM **Serving Two Masters: A Look at American Civil Religion and Its Impact on American Society and American Christianity** # 132

Presenter: Ethan Shearer

Mentor: Dr. Conrad Kanagy
Moderator: Christina Bucher

Since the establishment of the United States religious themes and identities have been associated with the social and political world of the country. Much of the history of the United States deals with elements of religious freedom, religious diversity, and even religious persecution. Over the two hundred and thirty seven years of the United States existence, forms a civil religion unique to the United States. This research will define American Civil Religion, explore how it has evolved over the years, and assess how it has shaped the social and political world of the United States by looking at individual American Presidents and their uses of civil religion during their terms. In addition, this study will also explore American Civil religion's impact on the religiousness of the United States, looking at how Christian practice and identity have been shaped as a result of the influence of American Civil Religion.

Sociology and Anthropology Paper Presentation H-211

11:00 AM **The New Boys Club: The Effect of Gender on LinkedIn Profiles** # 220

Presenter: Kristin Peachey

Mentor: Dr. Michele Lee
Kozimor-King

As social network sites continue to attract millions of users, one particular site is gaining popularity among young professionals between the ages of twenty-five and thirty-five, businesses, and recruiters. LinkedIn is a social networking site created by Reid Hoffman in 2002 to connect individuals with job opportunities. With the majority of people being offered jobs because of who they know rather than responding to job advertisements, LinkedIn can be a valuable resource for people to stay in contact with their professional network. LinkedIn may be an even greater resource for women, who have historically been left out of the business dealings of men, because the site has no gender bias. Little is known about the type of professionals taking advantage of this new networking resource and how are they using it. This exploratory research examined the effect of gender on LinkedIn profiles, including what types of information and how complete content was that users posted about themselves. The data for this research were obtained through a content analysis of thirty LinkedIn profiles. Results supported the hypotheses that women will have fewer connections than men, women will have more complete profiles than men, and women will have more female connections than male connections. However, the results did not support the hypothesis that women will have fewer recommendations than men. The findings of this study will be most meaningful to recruiters, young professionals, career development professionals, and gender equality advocates.

6th Scholarship and Creative Arts Day

SCAD Presentations

By Department

11:15 AM Truth, Justice, and the Blue Jay way: Perceptions of Social Justice at Elizabethtown College # 221

Presenters: Ethan Shearer, Kate Claffey, Angie Wilt

Mentor: Dr. Rita Shah

The Elizabethtown College community seeks to foster social justice for its workers, its students, and the community at large. This goal is evident in the college's mission statement which sites "social justice" as worthy goal of an Elizabethtown College education. This study sought to better understand Elizabethtown College's implementation of social justice in its curriculum and daily campus life. In addition, this study explored the perceptions of social justice and its implementation at Elizabethtown College among its students, faculty, and staff. This presentation will discuss the findings of the study, which focused on two aspects: 1) the relationship between views and definitions of social justice and political affiliation, college community status, and sex; and 2) the relationship between perception of social justice on campus and political affiliation, college community status, and sex. Additionally, the study explored attitudes regarding the events held during Social Justice Week. This presentation will also discuss opinions on the effectiveness of Social Justice Week to give a more holistic understanding of the role social justice plays in the Elizabethtown College community. Finally, this presentation will discuss exactly how social justice is perceived and implemented on the Elizabethtown College campus and whether these views positively or negatively reflect the College's motto "...learning is most noble when used to benefit others and affirms the values of peace, nonviolence, human dignity, and social justice."

Women and Gender Studies Panel of Presentations BLR (Steinman)

1:15 PM Rape Myth: A Study of the Cultivation of a Culture of Sexual Violence Through the Media Usage # 360

Presenter: Alyssa Broda

Mentor: Dr. Amy Milligan
Moderator: Dr. Amy Milligan

This paper analyzes the different rape myths used by news, television, film, music videos, and social media, and then demonstrates how these myths have a detrimental effect on society. In particular, I consider the impact that social media and the media at large have on Americans. By endorsing rape myth, the media persuades the public to also accept these fallacies, which leads to increased occurrences of rape and can even allow rapists to go free without conviction. Because of these media-endorsed rape myths, some rapists do not even know their sexual behavior is considered rape. In addition, rape myth also convinces victims that their assault will be trivialized and they will be considered liars. Many of these mediums are focused on youth, which is especially true of social media like Facebook and Twitter. Through these avenues, the media is grooming society to continue the rape culture that America has cultivated. The media's persistent use of rape myth is indirectly the cause of the high sexual assault rates in the United States. This paper cites both published research and real-life examples as proof of this correlation. The media's use of rape myth must be acknowledged so that both women and men can know the truth about sexual assault – a change which I contend will most likely result from a change in attitudes among Americans.

1:30 PM Exploring Violence Against Women # 361

Presenter: Kathryn Karoly

Mentor: Dr. Amy Milligan
Moderator: Dr. Amy Milligan

Feminist theory suggests that violence against women is the result of the expectation of female subordination in patriarchal societies around the world. Patriarchy does not simply refer to men, but rather a male-centered, male-dominated, and male-identified society that involves both men and women. Before patriarchy was established, matriarchal societies existed, in which lineage was traced through maternal heritage and women had control over the land. Violence against women is the product of women's oppression and men's privilege created by patriarchal society. The forms of violence discussed in Exploring Violence Against Women include sexual violence, types of intimate partner violence, and honor killings. This paper argues that violence against women has a vast impact beyond just personal experiences of women and men, as it shapes and impacts society as a whole.

1:45 PM Dangerous Traditions: Female Genital Mutilation # 362

Presenter: Chelsea Payne

Mentor: Dr. Amy Milligan
Moderator: Dr. Amy Milligan

Traditions and rituals are one of the key tools in differentiating between societies and cultures. These traditions can range from the bull runs of Spain to the holy sacraments of Catholicism. Although traditions are typically considered a positive aspect of culture, there are some that can have devastating results and are, outside of their home culture, considered unjust. One of these commonly practiced traditions is female genital mutilation. Female genital mutilation is the act of cutting, removing, burning, pricking, or piercing the genitals. The act of genital mutilation has physical, psychological, and social implications. The regions in which these surgeries are performed are characteristically remote locations with little or no medical facilities, resulting in the use of unsterilized tools and environment that could cause many physical and physiological problems. The procedure has also been known to cause Post-Traumatic Stress Disorder (PTSD) due to the violence and pain experienced during the procedure. This paper argues that female genital mutilation goes beyond just the bodily dangers of the procedure, including potential psychological and emotional problems. Many of these communities consider those who are not altered to be impure and un-marriagable, which is particularly detrimental when women rely socially on marriage for income and stability, finding their only other viable alternative living on the street. The women within these communities also believe that alteration of their genitalia is beautifying, making it a particularly difficult to institute change. This paper explains the differences between various types of genital mutilation, the potential effects that genital alteration has physical, mentally, emotionally, and socially, and discusses whether or not genital mutilation is a negative practice for future generations.

6th Scholarship and Creative Arts Day

SCAD Presentations

By Department

2:00 PM The Beauty Ideal: An Exploration of Attractiveness Across Culture and Time # 363
Presenter: Katherine Tripp Mentor: Dr. Amy Milligan
Moderator: Dr. Amy Milligan

Throughout history women have been expected to be a vision of beauty, but that sense of beauty has not remained constant over the years and is not constant across cultures. When the word beauty is mentioned an image comes to mind that has been influenced by what the culture has deemed beautiful. The Beauty Ideal is the way that culture expects women to look in order to be considered attractive to potential mates. Women in the United States and other western cultures might think of the models that they see in the advertisements found on television, in magazines, and plastered throughout cities. In contrast, women in non-western cultures have drastically different ideals of beauty that relate directly to the values of their cultural socialization. The ways in which women reach this goal vary from physically changing their body to applying make-up and other cosmetic products. There are methods that are harmful to women, and methods that a culture may deem necessary to succeed. Across time the image of what was considered beautiful has changed. Although women were once considered beautiful when they had voluptuous curves, the contemporary Western beauty ideal is now a woman who lacks a significant amount of body fat. There may be some similarities among various cultural Beauty Ideals; there is no single image of beauty that exists beyond generational and cultural contexts.

Young Center Panel of Presentations H-212

9:30 AM A Rare Case: Amish Acceptance of Genomic Medicine # 125
Presenter: Tatem Burns Mentor: Dr. Donald Kraybill
Moderator: Dr. Donald Kraybill

This presentation focuses on the acceptance and rejection of modern technology to treat genetic disorders. My research investigates the question of how Amish individuals afflicted with genetic disorders react to the technological advances used to treat them. I provide evidence to support my thesis that the Amish will be more accepting of modern medical technology to ameliorate their genetic issues than the use of technology in other religious facets of their community. I conducted research pertaining to numerous primary sources such as original publications and manuscripts from genetic studies performed on the Amish, along with secondary sources including books and articles about Amish genetic studies and Amish values and opinions on this innovative technology. The research explored Amish acceptance of new forms of genomic treatment found in their population, as well as specific genetic disorders and diseases afflicting many individuals within this genetically isolated community. I discovered in particular, that these genetic disorders and diseases are mainly caused by specific homozygous recessive alleles in Amish individuals. My research findings include information regarding a variety of genetic disorders in the Amish community that are being treated by professional physicians and modern technology and show a greater acceptance of this technology by the Amish population compared to the acceptance of other types of technology within the community.

9:45 AM Tradition vs. Health: The Amish Resistance to Medical Advances # 126
Presenter: Jesse Miller Mentor: Dr. Donald Kraybill
Moderator: Dr. Donald B. Kraybill

The Amish as a community generally reject the advancements of modern society as a testament to their values of nonconformity. Their abstinence from certain technologies is most predominantly seen in the medical field, as some of them oppose the practice of vaccination, utilize unqualified midwives for home births, and occasionally have been known to refuse medical treatment even in the case of grave illness. In cases such as these, the Amish opposition to medical technology is risky as there is a high incidence of medical problems as a result of such actions. My project addresses this research question: How have the Amish resisted technological advances in medicine such as vaccination, midwifery, and treatment of lethal illnesses? Utilizing an array of primary and secondary sources such as articles written by Amish families, Amish birth statistics, and court documents, my research project provides insight into the reasoning of the Amish in deciding to forego modern medical convenience. The research findings suggest that the fundamental force keeping the Amish from embracing this tide of medical modernity is their religious beliefs and their deep desire to resist any changes that may bring their community closer to the outside world. Amish objections to certain medical technology are rooted in their belief that, the more they have in common with the modernized world, the greater the risk of straying from their heritage and traditions.

10:00 AM Flying Over A Cuckoo Nest: the Amish and Mental Health # 127
Presenter: Crystal Uminski Mentor: Dr. Donald Kraybill
Moderator: Dr. Donald B. Kraybill

A significant percentage of Amish people in North America are afflicted with mental illness, yet few members seek professional psychiatric help. My research question is: Why are the Amish skeptical, even afraid, of the 'English' doctors, and why do many of those afflicted by psychological illness never seek formal diagnosis or treatment? I used both primary and secondary sources to support my thesis. Primary sources such as Amish periodicals and advertisements, minutes from People Helper meetings, and interviews provided data on Amish perspectives on mental health. A variety of secondary sources yielded crucial insights on the relationship between Amish mental health and modernity theory. The Amish consult the Bible as a path to health, and many shun the help of secular English psychiatrists, seeking the healing power of prayer over modern medical advances. My research examines how mental health is perceived in the Old Order Amish community, what factors contribute to the Amish aversion to professional psychiatric attention, and how the Amish methods of treating mental health compare to the treatment given by the 'English' counterparts. The results of my study document new developments such as the formation of, lay counselors, Amish operated treatment centers, medical advances and new bridges across the gap between Amish and 'English' perceptions of mental health. I have concluded that while the Amish may not readily accept all modern mental health practices, they are making strides in raising awareness and gaining more understanding of mental health issues.

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SCAD Presentations

By Department

10:15 AM "The Death of a Middleman:" Sharing the Burdens of Healthcare in Amish Society # 128

Presenter: Libby Hemler

Mentor: Dr. Donald Kraybill
Moderator: Dr. Donald B. Kraybill

My presentation focuses on the Amish and their rejection of commercial health insurance and Social Security. My project examines the following research problem: Why do the Amish object to commercial health insurance and how do they cover the cost of health care? Using a variety of primary and secondary sources, including an Amish magazine, *Family Life*, articles, and insights from modernity theory on rationalization, I provide evidence to support my argument that the Amish employ alternative measures to pay for their medical bills and to support those who have lost their major breadwinners. My research found that the Amish were granted an exemption to Social Security and the Affordable Care Act due to a religious objection to insurance. My results show that the Amish band together in what they call Mutual Aid organizations to raise funds as a community after an illness, hospitalization, or death has occurred. They also use a homemade, nonprofit hospital aid plan, similar to our insurance companies, however without paid staff or office facilities. Thus they avoid the significant costs charged by "the middleman" of a commercial insurance company. The Amish cite references in the Bible to support their rejection of institutionalized insurance and participation in Social Security. Their opposition corresponds with the rationalization aspect of modernity theory. Modern societies focus on planning for the future while traditional communities use an approach of taking on burdens as they occur.

11:00 AM Amish Rumspringa On Film: Fact or Fiction? # 250

Presenter: Marcella Jones

Mentor: Dr. Donald Kraybill
Moderator: Dr. Donald B. Kraybill

In recent years, Amish people have been highlighted on several television series and movies. This is a surprising development, considering that many Amish communities shun much publicity and television. Many of these media endeavors focus on rumspringa, the period of life when Amish adolescents explore the outside world and experiment with the things that are regulated in their communities. In the media portrayals of rumspringa, Amish teenagers are often featured partying, drinking, using drugs, and cursing, among other condemned behaviors. These media portrayals claim to show the reality of rumspringa for Amish youth. My research question is this: Are these depictions an accurate description of the rumspringa experience or are these images of Amish life simply fiction? I carefully examined the 2002 documentary *The Devil's Playground* and the 2012 reality show *Breaking Amish* and compared those results with the scholarly literature and research about rumspringa. When comparing these sources of information, my findings showed that the media focuses on extreme cases to attract viewers. Also, the Amish "actors" the producers choose to follow had abandoned the Amish lifestyle long ago, but they still claimed that identity to sell their product. The majority of Amish teenagers have mundane experiences compared to the ones shown in the media. Reality television and certain movies do not accurately portray the typical life of an Amish teenager but more accurately present aberrations of Amish life and fictional images.

11:15 AM In the Eye of the Beholder: Consuming Amish Images # 251

Presenter: Rebecca Boia

Mentor: Dr. Donald Kraybill
Moderator: Dr. Donald B. Kraybill

My presentation will focus on the commodification and consumption of Amish images by non-Amish people. I investigate this research problem: What effects did the rise of tourism—geographic and cyber—have on both Amish and non-Amish people? Using a variety of primary sources (interviews, documents, and first-hand accounts) and secondary scholarly sources, including insights from modernity theory on the dissemination of information, mobility, commodification, and consumption, I provide evidence to support my argument that the blossoming of tourism in recent decades has increased Amish contact and interaction with outsiders. My findings suggest that the presentation of Amish in the news media sparked their rise in the public eye. The facile nature of modern travel and access to the internet has brought the tourist's experience to the masses. There is a wide range of "Amish" commodities from traditional tours to products to entertainment media on the popular culture market. Some of these commodities are authentic, but many are simply produced because of the marketable fantasy that a "simple," less-complicated lifestyle is one purchase away. Becoming a commodity impacts the Amish community as members have to deal with curious onlookers on a regular basis. Due to the decline in the percentage of Amish who farm and the increase of tourism, a portion of the Amish make money off of the public consumption of their culture.

11:30 AM Amish Made: The Power of a Homemade Brand # 252

Presenter: Chris Powels

Mentor: Dr. Donald Kraybill
Moderator: Dr. Donald B. Kraybill

This paper examines the development, use, and consequence of the Amish brand. The emergence of the Amish brand emerged gradually over several decades in the marketplace and presently is used by some outside companies to market some non-Amish products through misleading methods. English companies brand products with statements such as "Made in Amish Country" or with symbols such as a horse and buggy to market their products as "Amish" even though they are not made by the Amish community. The research question for my project is this: With this brand being perpetuated primarily by English companies, how did the Amish brand emerge and why is it so powerful in the marketplace? I explore how the Amish brand is used, its effect on Amish communities, and to what extent Amish businesses themselves use it to their competitive advantage? I use various sources of evidence including English and Amish advertisements, interviews of Amish business owners, news/magazine articles, and scholarly journals as well as theories of marketing and modernization to conceptualize the meanings embedded in the Amish brand. My research findings suggest that the Amish brand has considerable power and wide appeal in the public marketplace. Even some Amish businesses have begun to accept this social branding it to their advantage. The majority however reject the use of its exploitation. It is uncertain however to what extent their acceptance of this brand will influence the Amish struggle with modernity in the future.

6th Scholarship and Creative Arts Day

SCAD Presentations

By Department

11:45 AM Amish Beard Cutting: Religious Practice or Hate Crime?

253

Presenter: Ambre Biehl

Mentor: Dr. Donald Kraybill
Moderator: Dr. Donald B. Kraybill

This research examined a series of beard cutting attacks against Amish individuals committed by members of the Bergholz clan—formerly of the Amish faith—led by their bishop Sam Mullet. These assaults occurred in the fall of 2011, drawing international attention and an FBI investigation. The attacks resulted in a federal trial held in September 2012. The jury convicted the 16 defendants of nearly 90 charges, including violating the 2009 Hate Crime Prevention Act. All of the defendants were sentenced to prison terms. My research question has two components. One, did the Bergholz clan violate Amish religious teachings and practices when they forcibly cut the beards of Amish men? Two, are the beard cutting attacks subject to the federal hate crime statute or are they protected under the 1st Amendment? The analytical framework for this research is cultural analysis, through which the Bergholz clan, their attacks, and the subsequent trial were examined using primary and secondary sources. For instance, *In Meiner Jugend*—an Amish devotional guide—provided insight into Amish culture. I also observed two days of the trial to gather additional evidence. The results show that the Bergholz clan acted outside of the Amish moral order, violating the tenets of nonviolence and forgiveness. Consequently, the act of forcible beard cutting is not an Amish religious teaching or practice, precluding 1st Amendment protection and subjecting the defendants to the federal hate crime statute.

1:15 PM Socializing "Little Dishwashers" in the Amish Community

370

Presenter: Samantha Poremba

Mentor: Dr. Donald Kraybill
Moderator: Dr. Donald B. Kraybill

The moment an Amish community learns of a pregnancy it sparks a debate over whether the newborn will be a "little woodchopper" or a "little dishwasher." In this project I explore the following research question: To what extent does the socialization of young girls influence their decision to remain Amish after Rumspringa? Within the Amish community, gender roles are prescribed throughout the stages of socialization. Using both primary documents (Amish directories, periodicals, essays, and theological writings) and secondary sources written by scholars, I found evidence to analyze the cultural expectations for the roles of women and how their upbringing shaped their choices to remain Amish. My results show that although Amish women have limited education many of them are content to lead lives as mothers and wives. As a result of their upbringing, they may even feel incomplete if they are not in positions of homemaking and childrearing. One Amish community member argued that "the socialization one receives while younger helps one appreciate and accept what one has been given." My findings demonstrate that the retention rates for women are higher than those for men in Amish society. The socialization of young women (through infancy, childhood, school-age, youth, adulthood, and old age) places them within roles which restrict their desire and ability to leave the Amish community but these restrictions do not necessarily lead to discontentment.

1:30 PM The Rise of Amish Schools: A Struggle To Be Separate

371

Presenter: Autumn Reichard

Mentor: Dr. Donald Kraybill
Moderator: Dr. Donald B. Kraybill

My presentation focuses on the growth of Amish schools, and explores why it was so difficult for them to separate from modern education. My research question is: Why do the Amish object to high school and public education? To tackle this question, I explored the history of Amish schools. I used a variety of Amish primary and secondary sources, and modernity theory (on specialization, discontinuity, and individuation), to support my argument that distinctive Amish values drove their separation from public education. Prior to 1950, almost all Amish children went to public schools. Since then, the Amish have developed their own private schools. In Wisconsin vs. Yoder, the Supreme Court determined Amish children could terminate their formal education at eighth grade. According to the court, freedom of religion and parental rights outweighed state educational requirements. The results of my study show, that while Amish people do support education through eighth grade, they consider learning trades through apprenticeships, sufficient to earn a stable income within their society, and even in the larger society, if they leave. My findings also demonstrate that despite diversity of quality, throughout different Amish communities, each classroom provides cooperative activity, respect, and basic skills essential for Amish life. These values of Amish life are expressed in the curriculum and practices of the 2000 Amish-operated schools today. These private schools play an extremely important role in passing on Amish values, developing friendships, and in preserving Amish culture for generations to come.

1:45 PM Minimalist Methods: An Examination of Amish Pedagogy

372

Presenter: Katie Rozman

Mentor: Dr. Donald Kraybill
Moderator: Dr. Donald B. Kraybill

In my presentation, I discuss the curricular methods used within Amish schools. My project explores the following research question: How does the curriculum used in Amish schools appropriately prepare children for a successful life within Amish society? It is apparent that the Amish schools vary greatly from today's educational system. Nonetheless, Amish children enter the workforce equally or better prepared than their public school peers, despite having received a much simpler and inexpensive education. I examine why timeless methods have sustained their effectiveness within Amish culture. Using an array of both primary and secondary sources, as well as insights from modernity theory on specialization and discontinuity, I provide evidence to support the following thesis: Although at first glance, Amish pedagogy may appear primitive and rudimentary, their curriculum, in fact, is designed to educate and develop students for a successful Amish life. My analysis shows that all educational institutions function to transmit cultural norms, in addition to general knowledge. I argue that Amish schools are no different. Each curricular element operates to educate Amish children for practical living within their community. Through my exploration of Amish curriculum, I found that the instructive methods, however complex or simple, have been selectively chosen to reinforce Amish values, and appropriately prepare schoolchildren to become productive members of Amish society.

6th Scholarship and Creative Arts Day

SCAD Presentations

By Department

2:00 PM

Wisconsin v. Yoder: The State, the Parent, the Child

373

Presenter:

Samuel Weaver

Mentor: Dr. Donald Kraybill

Moderator: Dr. Donald B.

Kraybill

The presentation examines the legal arguments behind the 1972 Supreme Court decision, *Wisconsin v. Yoder*, in which the Supreme Court ruled that the Amish, an Anabaptist religious minority, were protected under the Free Exercise Clause of the First Amendment from compulsory high school education for their children. The research investigates the problem of: What legal contentions involving the Free Exercise Clause were argued in the *Wisconsin v. Yoder* decision and how have these arguments been viewed by legal scholars since the decision? Drawing from the original text of the Supreme Court decision and a variety of secondary sources on the case's arguments, I evaluate the contrasting positions supporting and criticizing the ruling. The sources include comprehensive perspectives on the case as well as legal arguments and commentary pertaining more directly to specific contentions of the Supreme Court ruling. *Wisconsin v. Yoder* is an important case to study because of the questions it raises about the structure of American society. I argue that the case and the decision have important consequences for a democratic society that struggles with issues such as the role of government, religious freedom, and parental rights. My findings demonstrate how the interests of the State, religious liberty, the rights of the parent, and the rights of the child were all at stake in this high court decision. The consequence of this decision has wide-ranging implications for related issues in contemporary society.

8:00 AM

The Love Feast: The Ritual Battle Against Modernity

35

Presenter:

Karley Ice

Mentor: Dr. Donald Kraybill

Moderator: Dr. Donald B.

Kraybill

My presentation focuses on the preservation of traditional Brethren love feast rituals. My project examines this research question: How have the Old German Baptist Brethren resisted changes to their rituals of the love feast and how do these rituals reinforce their beliefs? I also investigate how this preservation of ritual differs from the changes that have occurred in the Church of the Brethren and explore how modern American values and rituals are different. I provide evidence to support my thesis that: The traditional Love Feast rituals of the Old German Baptist Brethren have been preserved to reinforce their beliefs and distinguish them from the Church of the Brethren and other Protestant churches. To support my thesis, I use a variety of secondary and primary sources such as the Minutes of the Annual Meetings of the Old German Baptist Brethren and insights from modernity and ritual theories. My investigation suggests that the prominent rituals of the Love Feast such as preparation, footwashing, the agape meal, and communion have maintained the values of the Brethren. This preservation allows them to flourish while remaining distinctly different from the modern world. This is not the case in the Church of the Brethren who have strayed from their roots and adapted modern customs in their revised version of the Love Feast. I found that the traditional Love Feast strengthens the beliefs of the Brethren through sacred rituals that not only distinguish the faith, but more importantly preserve it.

8:15 AM

Cultural Cuisine: Amish and Americans at the Table

36

Presenter:

Jessica Lehr

Mentor: Dr. Donald Kraybill

Moderator: Dr. Donald B.

Kraybill

This presentation focuses on the shift from farm-fresh to processed foods in Amish and American communities. My research explores the question of how present day Amish cut recipes differ from American recipes. The cultural aspects of food based on the commentary in published cookbooks were also examined to describe Amish and Mainstream culture. Multiple primary sources in the form of cookbooks published by Amish and several secondary sources including other cookbooks and articles on food modernization provided me ample information for my study. Knowledge of the modernization of food and food processes also offered evidence to support my thesis that over the past century, the socio-cultural change of the shift away from fresh food has caused many changes in American cookbooks with fewer in Amish cookbooks and recipes. My investigation suggests that while there are many differences in the preparation of Amish and American foods such as the cooking and preparation methods, there are also many similarities including the use of processed foods and recipes. Contrary to modern belief, I have learned that the Amish use many modernized items such as cake mixes. Additionally, I have found that Amish cookbooks share more of a communal story than American cookbooks do. Finally, I have concluded that Amish recipes have more cultural content and relation to Amish society than American recipes do to mainstream society.

8:30 AM

Customized Cultivation: How the Amish Negotiate with Modern Farm Technology

37

Presenter:

Hannah Geiger

Mentor: Dr. Donald Kraybill

Moderator: Dr. Donald B.

Kraybill

This presentation examines the effects of modern farming technology within Amish society. My analysis concentrates on this research question: How have the Amish adapted their farming practices in response to increasingly modern farm technology? I use a variety of primary and secondary sources on Amish farming techniques that demonstrate how the Amish manage to retain their traditional practices in the world of corporate agriculture. These sources provide evidence to support my thesis that through their unique combination of traditional and modern practices, the Amish have customized farming technology in a way that helps them retain their non-modern identity while allowing them to remain productive. My findings suggest that the Amish have selectively eliminated certain farming technologies from their agricultural practices to retain some of their most basic and traditional beliefs. These limits on farming technology are crucial to maintaining the solidarity of their close-knit community. Because automotive vehicles threaten the close social bonds of Amish society, the use of tractors is restricted to the barn, where they provide mechanical power for other farm implements. In order to productively comply with this constraint, farmers have learned to adapt modern equipment so that it can be pulled by horses and powered by a mounted engine. Through this analysis, I have discovered that the Amish are open-minded towards new farming technologies and they are willing to compromise with their own traditional practices.

6th Scholarship and Creative Arts Day

SCAD Presentations

By Department

8:45 AM

Restricting Red Tape: Why The Amish Reject Bureaucracy

38

Presenter:

Collin Davidson

Mentor: Dr. Donald Kraybill

Moderator: Dr. Donald B.

Kraybill

This paper examines the rejection of bureaucracy in Amish culture. Further, it poses the question as to why and how the Amish have resisted bureaucracy. The evidence shows that the Amish have effectively persevered in their fight against bureaucracy by developing other forms of cultural solidarity to hold their society together. Bureaucracy is defined and analyzed in both historical and sociological contexts. Understanding bureaucracy as a sociological concept is crucial to this research because it outlines the cognitive aspects and clarifies the concepts of of mechanic and organic solidarity. Using a multitude of primary and secondary sources and insights from modernity theory, the study found evidence that Amish resistance of bureaucracy as a unique and sustainable trait of their culture. Specifically their rejection of a hierarchical and denominational church structure, the consolidation of public schooling, and corporate-structured businesses are all instances of such resistance. The findings also show that the Amish have compensated for the lack of bureaucracy by creating informal institutions such as rural schools, microenterprises, Amish Aid groups, and most importantly, the Old Order Amish Steering Committee. The Amish have used the Steering Committee as a liaison between Amish society and the United States government. The Amish rejection of bureaucracy has been steady and successful throughout the twentieth century and their numerous informal networks have provided a stable foundation for Amish solidarity.
