



Conference Schedule

Friday April 26, 2013

Please see abstract section for abstracts of presentations.

Poster Session - 2:30-3:30

Lecture Center Hallway (by LC 30 and LC 31)

Rachel Brotman:

"Can you understand me now? Effective techniques for accent adaptation."

Brendan Flinn:

"A Quantitative Analysis of Health Care Reform-Focused Advertisements in the 2010 Congressional Elections."

Daniel Gustafson:

"Lethal Negotiation: The Effects of Violence on the Likelihood of State-Organization Negotiation."

Zachary Grieb:

"The role of progesterone receptors in the mediation of GABAergic Neurons."

Michael Hovish:

"Switching Parameters as a Function of Annealing Conditions in HfO₂ Resistive Memory Devices (RMD)."

James Iuliano:

"Characterizing the Metastatic Phenotype of Cancer Cells using Nanoscale Lined-Topography."

Michael Johnson:

"Validation of The Light/Dark Social Avoidance Test Using the Fragile X Mouse Model."

Melissa McGreal:

"Process of Adult and Childhood Sexual Assault Disclosure."

Brittany Mooney:

"Effects of Induced Mood on Memory."

Thomas Postiglione:

"Amide I vibrational mode suppression in surface (SERS) and tip (TERS) enhanced Raman spectra of protein specimens."

Shelby Quackenbush:

"At the Northern Border: The Hill Tribe Struggle for Human Rights, Status, and Citizenship within Thailand's Booming Sex Industry."

Zachary Richards:

"The Detection of Non-transiting Exoplanets."

Heather Smith:

"The Effects of Progesterone Receptor on Development of Serotonergic Circuits that Mediate Cognition."

Lauren Stern:

"Just breathe: What does it take to be a Stage Manager."

Bradley Sutliff:

"Aptamer-Linked Nanoparticles to Target Ovarian Cancer Cells."

Alex Talamo:

"Using bioglycogen dendrimeric nanoparticles as a novel, non-toxic transfection agent to deliver siRNA to ovarian cancer cells."

Adele Touhey:

"Questioning the Validity of Accusations Made by China and the U.S. on Cyber-Espionage Activities."

Welcome and Award Presentations: 3:30-4:30
James Dias, Ph.D., Vice President for Research

Lecture Center Hallway (by LC 30 and LC 31)

Session I - 4:30-6:00

LC 3A: Presentations

Moderator:

Shaina Bienvenue:

"Marian McPartland: Contributions to Piano and Jazz."

Sugyan Dixit:

"Hiromi Uehara: Rise of Jazz Virtuoso."

Lauren Kornak:

"Iconic Black Composers: Scott Joplin's Role in American Piano Music and American Society."

Stacy Heller:

"Gershwin and Rhapsody in Blue: A Musical Era Is Born."

Kevin Judd:

"Henry Cowell."

LC 3B: Presentations

Moderator:

Alvin George:

"Galanin's effects in Alzheimer's Disease: Potential approaches to countering cognitive impairments."

Prince Jacob:

"Identification of modified nucleotides in viral RNA genomes by mass spectrometry and the L-A dsRNA virus as a model."

Zachary Olmsted:

"From Yeast to Human: Novel Insights Into Control of Mitotic Spindle Assembly Through Functional Regulation of the Microtubule Organizing Center."

Jennifer Pollard:

"Implications of Tanzanian Culture on Nutrition and Their Effects in People Living with HIV/AIDS."

LC 3C: Presentations

Moderator:

Stanley Abraham:

"Direction of embryonic salivary gland development and differentiation by Rac1."

Alexandra Briggs:

"The Effects of Callous Unemotional Traits in Children on Adulthood Criminality with a Moderator of Therapy."

Ian Andrew Lepkowsky:

"Social Media Fetishism: The Substitution of Life and Disavowal of Death."

Rochel Rubin:

"Cold as an Entity."

Ashley Bishop:

"Circus Ecuado."



Saturday April 27, 2013

Please see abstract section for abstracts of presentations.

Session II - 12:00-1:15

LC 3A: Presentations

Moderator: Nikoleta Papa

Daniel Levy:

"James P. Johnson and his Influence on Modern Jazz."

Katie Schimanski:

"Leo Ornstein and His Impact on Futurism."

Deidre Pinkerton:

"Jazz Influence on Classical Music."

LC 3B: Presentations

Moderator:

Fatima Aboul-Seoud:

"Factors Affecting the Detection of Relationship Status Deception."

M. Siobhan Webber:

"Open Source and Libraries: An Overview."

James Thompson:

"Pity and AIDS: Performative Ethics."

LC 3C: Presentations

Moderator:

Cortney von Hahmann:

"Diastereoselective synthesis of pentafluorosulfanylated β -lactams, precursors for docetaxel modification."

Anna Mondello:

"Bliss in Barnes: How a Loss is Still a Gain."

Smriti Sinha:

"Katha Revisited: The Story Behind the Story."

LC 3A: Presentations

Moderator: Smriti Sinha

Franklin Berkeley:

"Jelly Roll Morton."

Jacob Crofoot:

"John Cage and His Prepared Piano."

Natalya Mokhor:

"Mary Lou Williams and Jazz."

Sahan Shrestha:

"Art Tatum."

LC 3B: Presentations

Moderator: Fatima Aboul-Seoud

Sebastian Agosti:

"The 'Dirty War' in Argentina."

Samantha Arpino:

"Chasing Perfection: Exploring the Impact of Popular Culture's Formation of 'The Ideal Woman' on Women in the Contemporary United States."

Luis Gabriel Sanchez:

"Andean Cosmologies in the Ontological Crisis of the 21st Century."

Nikoleta Papa:

"Language Contact and Variation in the Spanish of Catalonia."

Mathew Weiss:

"Explaining Revolution to Children: The Influence of Domestic Radicalism on the Portrayal of Russian Radical Intelligentsia in Anglo-American Children's Literature, 1925-1935."

LC 3C: Presentations

Moderator:

Justin Coon:

"Nanochemoprevention of breast cancer: Enhanced delivery and anticancer effects of pomegranate polyphenols in breast cancer cells."

Kathryn Fanning:

"Antibiotic intolerance and resistance: Aminoglycoside binding to bacterial and human ribosomal RNA targets."

Rajan Kumar:

"Molecularly imprinted polymers for development of an in-situ biosensor."

Alex Schin:

"The role of the functional domains of the human RNA helicase RCK/p54 on hepatitis C virus gene expression."

Session IV- 3:15-4:30

LC 3A: Presentations

Moderator:

Julie Ann Bingham:

"Walking Corpses & Conscious Plants: Possibilist Ecologies in Graphic Novels."

Autumn Kuklinski:

"Hulk Smash! Regulating Anger Requires More Self-control Strength."

Kevin Smith:

"Experiencing Kaqchikel Tikonela."

LC 3C: Presentations

Moderator: James Thompson

Max Lawatsch:

"A Revolutionized Coterie: The Transformation of British Romantic Critical Practices and Contemporary Internet Fora."

Austin Gunner Litwhiler:

"From Pulp to Webpage: Homestuck and Postmodern Digital Narrative."

Ariana Wedin:

"How and for what reasons did American medical doctors react to the Vietnam War and how did they relate their reasons to their profession?"

Undergraduate Research at the University at Albany

Award and Funding Recipients, 2012-2013

More information about each project can be found in the abstracts section of this program.

Presidential Undergraduate Research Awards

Stanly Abraham: Biology: "Direction of Embryonic Salivary Gland Development and Differentiation by Rac1."
Faculty Mentors: Melinda Larsen and Sharon Sequeira.

Julie Ann Bingham: English: "Walking Corpses & Conscious Plants: Possibilist Ecologies in Graphic Novels."
Faculty Mentor: Eric Keenaghan.

Zachary Grieb: Psychology: "The Role of Progesterone Receptor in the Mediation of GABAergic Neurons."
Faculty Mentor: Christine Wagner.

Autumn Kuklinski: Psychology: "Hulk Smash! Regulating Anger Requires More Self-control Strength."
Faculty Mentor: Mark Muraven.

Max Lawatsch: English: "A Revolutionized Coterie: The Transformation of British Romantic Critical Practices and Contemporary Internet Fora"
Faculty Mentor: Kir Kuiken.

Ian Andrew Lepkowsky: English: "Social Media Fetishism: The Substitution of Life and Disavowal of Death."
Faculty Mentor: Mary Valentis.

Austin Gunner Litwhiler: English: "From Pulp to Webpage: Homestuck and Postmodern Digital Narrative."
Faculty Mentor: Patricia Chu.

Luis Gabriel Sanchez: Globalization & Latin American, Caribbean and U.S. Latino Studies: "Andean Cosmologies in the Ontological Crisis of the 21st Century."
Faculty Mentor: Fernando Leiva.

Kevin Smith: Anthropology: "Experiencing Kaqchikel Tikonela."
Faculty Mentor: Walter Little.

Heather Smith: Psychology: "The Effects of Progesterone Receptor on Development of Serotonergic Circuits that Mediate Cognition."
Faculty Mentor: Christine Wagner

Courtney von Hahmann: Chemistry: "Diastereoselectives synthesis of pentafluorosulfanylated β -lactams, precursors for docetaxel modification."
Faculty Mentor: John Welch.

Arianna Wedin: History: "How and for what reasons did American medical doctors react to the Vietnam War and how did they relate their reasons to their profession?"
Faculty Mentor: Carl Bon Tempo.

Partial funding for the Undergraduate
Research Conference is provided by the
University Auxiliary Services.

Endowed Research Awards:

Justin Coon: Biology (Neuroscience): "Nanochemoprevention of breast cancer: Enhanced delivery and anticancer effects of pomegranate polyphenols in breast cancer cells."

Faculty Mentor: Ramune Reliene.

Greenwald Endowment

Kathryn Fanning: Biology: "Antibiotic intolerance and resistance: Aminoglycoside binding to bacterial and human ribosomal RNA targets."

Faculty Mentor: Paul Agris

Schmid Endowment

Alvin J. George: Biology (Neuroscience): "Effects of galanin on cholinergic modulation of memory and hippocampal insulin activity: Interactions with amyloid and Alzheimer's disease."

Faculty Mentor: Ewan McNay

Zimberg Endowment

James Iuliano: Chemistry: "Characterizing the Metastatic Phenotype of Cancer Cells using Nanotopography."

Faculty Mentor: Nadine Hempel

Greenwald Endowment

Rajan Kumar: Nanoscale Science with Biology Focus: "Molecularly imprinted polymers for development of an in-situ biosensor."

Faculty Mentor: Magnus Bergkvist

Schmid Endowment

Alex Schin: Biology: "The role of the functional domains of the human RNA helicase RCK/p54 on hepatitis C virus gene expression."

Faculty Mentor: Cara Pager

Greenwald Endowment

Bradley Sutliff: Nanobioscience: "Aptamer-linked nanoparticles for targeted drug-delivery to ovarian cancer cells."

Faculty Mentor: Nadine Hempel

Greenwald Endowment

Alex Talamo: Nanoscale Science: "Using bioglycogen dendrimeric nanoparticles as novel, non-toxic transfection agents to deliver siRNA molecules against oncogenes to ovarian cancer cells."

Faculty Mentor: Nadine Hempel

Greenwald Endowment

Abstracts – Arranged by Session and Room

All project titles and abstracts are printed as received.

Friday April 26, 2013

Poster Session

Lecture Center (by LC 30 and LC 31)

Rachel Brotman: “Can you understand me now? Effective techniques for accent adaptation.” Project Advisor: Laurie Feldman. Department of Psychology.

This experiment examines how native English speakers understand words presented in a foreign accent. Research that improves how people from various cultures can interact with one another when all are not native speakers is important. Previous work by Adank, Hagoort, & Bekkering (2010) proposes that imitating foreign-accented sentences aids adaptation to that accent more than passive listening. Kang & Pashler (2011) suggest that interleaving contrasting stimuli at training promotes inductive learning more than blocking by similarity. Our experiment compares three study methods – imitation, repeat, and listening – to examine how English speakers adapt to Dutch-accented English words. We compare identification of old and new words when Dutch-accented words alternate with English-accented words and when only Dutch-accented words occur in training. Our results differ from Kang & Pashler (2011) in that presentation of all Dutch-accented words improves identification of new words more than interleaving them with English-accented words. Thus far, there have not been significant differences between study methods that show listening is less effective than repeating or imitating on adapting to the accented word. Ongoing research examines if these results are task-specific, or if there are mechanisms of production that are being overlooked that aid in adaptation.

Brendan Flinn: “A Quantitative Analysis of Health Care Reform-Focused Advertisements in the 2010 Congressional Elections.” Project Advisor: Patricia Strach. Department of Political Science.

The Affordable Care Act’s merits, constitutionality and implications for health care consumers has been extensively debated since the law was enacted in March, 2010. The months following the intersected with the campaigns for the 2010 US Congressional election, and the ACA became a major issue that determined the outcome of many House and Senate races. A full gamut of special interests spent millions of dollars on advertising that promoted their views on the law and attempted to curry the public’s support. The vast majority of health reform-related advertisements aired were in opposition to the law, which hindered both the public’s support for the ACA and its understanding of the law’s goals and implications.

Prior research has shown that as people become more aware of what the ACA does and does not do, public support for the law increases. Through the analysis of data collected originally by the Wesleyan Media Project, this paper and poster will address questions regarding where advertisements were focused, how much money was spent by each side and how many ads from each side Americans saw. They will also provide a context and explanation of public opinion surrounding the Affordable Care and contribute to the ongoing discussion of the role of special interests in policymaking and elections.

Daniel Gustafson: “Lethal Negotiation: The Effects of Violence on the Likelihood of State-Organization Negotiation.” Department of Political Science.

I investigate a few of the underlying preconditions for state-ethno political organization negotiation. Specifically, I explore the effect of organizational violence on the likelihood of reaching the bargaining table. I argue that organizations and states act in a rational and strategic framework. Expanding upon this theory, I argue that negotiation is most likely to occur when it is in the state’s best interest. I claim that negotiation is in the state’s best interest when organizations operate at the extremes of violence, either very low or very high levels. Therefore, I argue that groups using intermediate levels of violence are less likely to experience negotiation with the state. I use a logistic regression on the MAROB dataset from 1980-2004 to test this causal relationship. Although I find no support for

my argument regarding the effect of violence on negotiation, my data confirm other claims made in the literature. I close this study with a discussion of my findings and suggestions for further research.

Zachary Grieb: "The Role of Progesterone Receptor in the mediation of GABAergic Neurons." Project Advisor: Christine Wagner. Department of Psychology.

The prevalence of some developmental behavioral disorders, such as autism, dyslexia and ADHD, are strongly influenced by gender, with a much higher incidence in boys than girls. Understanding the neurobiological mechanisms by which the brains of males and females develop differently may provide clues to understanding the etiology of these disorders. Differential exposure of males and females to steroid hormones such as testosterone play an important role in producing sex differences in behavior in animal models. Steroid hormones activate nuclear receptors, which as transcription factors exert powerful effects on fundamental processes of neural development. During perinatal life, testosterone secretion in males induces significantly higher levels of progesterone receptor (PR) expression in the medial preoptic nucleus (MPN) than in females, suggesting that progesterone and its receptor may play an important role in the sexual differentiation of this region. The possible mechanism by which PR generates sex differences might be by regulating levels of glutamic acid decarboxylase (GAD), the rate limiting GABA synthesizing enzyme. GABA, an amino acid neurotransmitter is important for the proper development of neuronal morphology and neural connections, and GABAergic neurons are the target of progestins in adults. In neonatal rats, GAD is expressed in a sexually dimorphic manner, with males expressing higher levels than females.

This study tested the hypothesis that PR activity during neonatal life is important for sex differences in levels of GABA. To test this hypothesis, male and female rats were treated with either the PR antagonist, RU486 (20 mg/ml) or an equal volume of the oil vehicle from postnatal day t (P1) through P10. Brain tissue was collected at P10, tissue punches taken from the MPN, and proteins extracted. Western blot analysis was used to quantify levels of GAD expression. Data analysis is currently in progress. It is predicted that inhibition of PR activity in males will reduce GAD to levels seen in females, thereby abolishing sex differences in GAD. The PR antagonist should have no effect on GAD levels in females, as females do not express PR in the MPN in the absence of testosterone. These results would suggest that PR activity is one mechanism by which GABA may exert differential effects on neural connectivity in the developing brains of males and females. These findings have implications for understanding the neurodevelopmental mechanisms underlying gender biases in behavioral disorders.

Michael Hovish: "Switching Parameters as a Function of Annealing Conditions in HfO₂ Resistive Memory Devices (RMD)." Project Advisor: Nathaniel Cady. Nanoscale Science.

Resistive Random Access Memory (ReRAM) has attracted much attention among researchers due to its fast switching speeds [1], lower switching voltages [2], and feasible integration into industry compatible CMOS processing [3]. These characteristics make ReRAM a viable candidate for next-generation Non-Volatile Memory. Transition-Metal-Oxides have been proven to be excellent materials for ReRAM applications [3-5].

We aim to investigate the effect of various, post-deposition anneals (PDA) on the switching parameters of Ni/Cu/HfO₂/TiN Resistive Memory Devices (RMD). A Rapid Thermal Anneal (RTA) will be employed to limit diffusion of the bottom electrode into the active layer. We hypothesize that employing a PDA on the HfO₂ active layer could result in changed switching parameters of working devices. PDA allows us a mechanism for adjusting the microstructure and quality of the active layer, which in turn could influence switching parameters. We hope that understanding the effect of PDA conditions can lead to not only better devices, but a better understanding of device performance and mechanisms.

James Iuliano: "Characterizing the Metastatic Phenotype of Cancer Cells using Nanoscale Lined-Topography." Project Advisor: Nadine Hempel. Department of Chemistry.

Metastasis represents the most lethal stage in cancer progression, due to difficulties in detection and treatment of metastatic disease. Hence, there is a need for better understanding of the mechanisms that drive metastatic behavior. Cancer cells use the surrounding three-dimensional extracellular matrix (ECM) as chemical cues and physical guides for migration and invasion. In the present study we use a pseudo-three dimensional in vitro platform to differentiate metastatic from the non-metastatic cells. Using nanoscale lines (□100nm) patterned on silicon wafer surfaces to mimic the dimensions of collagen fibrils of the ECM, we were able to show that metastatic bladder cancer cells display enhanced alignment and migration along the lined-topography compared to a non-metastatic parental cell line. These data suggest that cancer cells are able to sense and utilize their physical environment, in the form of nanometer-scale structures, to enhance their metastatic behavior.

Michael Johnson: "Validation of The Light/Dark Social Avoidance Test Using the Fragile X Mouse Model." Project Advisor: Lorenz S. Neuwirth. Department of Psychology.

Genetically altered mice are engineered to create Autistic-like models for investigating behavioral end points consistent with human symptoms. Notably, the Autistic-like mouse models target social approach behavior rather than avoidance behavior inconsistent with the Diagnostic Statistical Manual IV (DSM-IV) criteria for clinical features of the Autism syndrome. Here we evaluated the Fragile X syndrome KO mouse (FXS KO), a well established model of autism and mental retardation, in a standardized 3 chamber social approach task and contrasted its findings with a novel Light/Dark social avoidance test to best elucidate between these social behavior accuracies in confirming construct validity between tests and mice behavioral effects. In the traditional 3 chamber social approach test FXS KO mice exhibited a reduced time in zone compared with wild type (WT) mice when presented with a stranger mouse, and no difference in time spent with a novel toy. When comparing the familiar mouse with a novel mouse, the FXS KO mice spent more time with the familiar mouse than the novel stranger compared with WT mice, indicating a social deficit in approaching novel conspecific mice. In addition, FXS KO mice spent more time moving away from the novel stranger mouse than WT mice. FXS KO mice also spent more time moving away from the novel mouse when presented with a familiar mouse when compared to WT mice. In the light/dark social avoidance test, interestingly the FXS KO mice exhibited increased time and entries in the light and social zones. Taken together the novel light/dark social avoidance test was validated with the three chamber social approach test but evidenced another way to investigate social behaviors using an intrinsic motivator (i.e. the dark box). This choice system to socialize or avoid may be useful in elucidating how genetic mice with an Autistic-like syndrome behave consistent with DSM-IV criteria for autism.

Melissa McGreal: "Process of Adult and Childhood Sexual Assault Disclosure." Project Advisor: Megan Kurlychek. School of Criminal Justice.

The subject of my undergraduate thesis paper is the differences between adult and child sexual assault disclosure. Disclosure is not a one-time event. It is an ongoing process that every victim is confronted with. The Child Sexual Abuse Accommodation Syndrome by Ronald C. Summit is a theory on the process of sexual assault disclosure by children. However, there are gaps in the literature and no established theory on the process of disclosure by adult victims of sexual assault. In my thesis, I will propose a theory on the process of adult sexual assault disclosure based on the differences in disclosure of sexual assault between children and adults. I plan to interview police officers and mental health professionals to collect information in support of this theory.

Brittany Mooney: "Effects of Induced Mood on Memory." Department of Psychology.

A cognitive theory of emotion has been sustained by demonstrations of mood congruency in correlation with mood states and memory processes. Mood-congruency effects indicate that when a person is in a specific mood it is likely that remembered information will be consistent with that mood. The purpose of this paper/poster is to discuss the effects of mood congruency on memory. The research gathered suggests that memories of positive experiences allow for easier recall in the elated mood because mood state at retrieval reflected the happy mood in which the memory was encoded. In the same regard, memories of negative experiences would be more likely to be recalled in a depressed mood due to the close approximation of the initial encounter when the memory was encoded. The most important finding is the conclusion that a correlation exists between cognition and emotion.

Thomas Postiglione: "Amide I vibrational mode suppression in surface (SERS) and tip (TERS) enhanced Raman spectra of protein specimens." Project Advisor: Igor K. Lednev. Department of Biochemistry and Molecular Biology.

Surface- and tip-enhanced Raman spectroscopy (SERS and TERS) are modern spectroscopic techniques that show great potential for the structural characterization of biological systems. Their high sensitivity allow for chemical detection at the single-molecule scale. In our previous study we employed SERS to detect insulin fibril oligomers that form on the early stages of protein aggregation. The detection was performed based on the position of amide I band of the acquired SERS spectra. Amide I position represents the conformation of the polypeptide backbone. We found that almost half of all collected spectra did not have amide I band. In the current work we investigated this phenomenon of amide I band silence. We found that homo-glycine and -alanine peptides, which have small side chain groups exhibited amide I in 100% of SERS spectra, while peptides with bulky side chains, such as tyrosine and tryptophan, exhibited the amide I band in 70% and 31% of the acquired spectra, respectively. This directly indicates that amino acid side chain enforces distance between the peptide bond and the metal nanoparticle preventing their immediate contact.

Shelby Quackenbush: "At the Northern Border: The Hill Tribe Struggle for Human Rights, Status, and Citizenship within Thailand's Booming Sex Industry." Project Advisor: Barbara Sutton. Department of Journalism and Women's Studies.

Based on feminist research methods, my project, which ultimately culminated into a paper, explores the political, economic, and social factors that contribute to the vulnerability, marginalization, and sexual exploitation of Thailand's northern hill tribe communities. As ethnic minority groups that live in villages in the mountains of northern Thailand at the heart of Southeast Asia's drug and sex trafficking industries, hill tribe communities struggle for citizenship, fundamental rights, and status in a nation that physically and economically exploits them. Withheld from the right to quality education and healthcare, and systematically discriminated against in other social institutions, northern hill tribe children are particularly at risk of being targeted for sex work in the south of Thailand. This past summer I had the opportunity to travel to Thailand to work as a volunteer in an orphanage in Sing Buri, a central Thai province. The orphanage was established by local monks to serve as a school and home for these "second class" children whose families stemmed from the northern hill tribes of Thailand. Through extensive analysis of scholarly articles, textual artifacts, and my own in-country experiences, research, and analysis, I argue that the Thai government is not only failing to put policies in place to combat the marginalization of its hill tribe communities but in fact, decisively contributing to the hill tribes' vulnerability in order to benefit from a flourishing sex tourism industry.

Zachary Richards: "The Detection of Non-Transiting Exoplanets ." Project Advisor: Kevin Knuth. Department of Physics.

Since the discovery of a planet orbiting the star 51 Pegasi in 1995, exoplanet detection has become one of the most popular research areas in astrophysics. The Kepler Space Telescope constantly monitors 150,000 stars in a small patch of sky in the constellation Cygnus to watch for planets eclipsing their host stars. Such an eclipse is detectable as a slight temporary and periodic decrease in the light recorded from the host star. Since an eclipse, or transit, happens when a planet passes in front of its host star with respect to our line of sight, many planets are expected to go undetected. Despite this, the Kepler mission has to date identified over 2700 planetary candidates. This research project concerns the detection of non---transiting exoplanets. All planets reflect light, and as they orbit their host stars these planets undergo phases much like we see with our moon. We have observed that in some cases, reflected light can be detected from planets in the data collected by the Kepler Space Telescope, and that these light curve signatures follow well--- defined oscillatory patterns dictated by the planet's orbital elements. Using Bayesian probability theory methods to model reflected light we are performing a study of the Kepler public data set to identify non---transiting exoplanets. We have verified our algorithms on two known planets, HAT---P---7b and KOI---13b, and have detected a possible non---transiting planetary candidate.

Heather Smith: "The Effects of Progesterone Receptor on Development of Serotonergic Circuits that Mediate Cognition." Project Advisor: Christine Wagner. Department of Psychology.

The administration of synthetic progestins to pregnant women to prevent premature delivery has increased dramatically despite little understanding of the effects of these progestins on fetal neural development. In rodent models, progesterone receptors (PR) are expressed during critical developmental periods for medial prefrontal cortex (mPFC), a region critical for complex cognitive functions. Neonatal rats were given daily injections of the progesterone antagonist, RU486, or vehicle. In adulthood, RU486 treated rats showed impaired cognitive flexibility and increased perseverative behaviors. Because serotonin activity within the mPFC mediates cognitive flexibility, ongoing experiment examines the effects of RU486 during development on the density of serotonergic axons in the mPFC, as a potential underlying mechanism for disruptions in cognitive behavior. These findings suggest that PR activity during development is required for normal development of mPFC-dependent cognitive behaviors and indicates caution in the exposure of human fetuses to synthetic progestins during important periods of cortical development.

Lauren Stern: "Just breathe: What does it take to be a Stage Manager." Project Advisor: Andi Lyons. Theatre Department.

How do you take a play on a page and bring it to life on stage? How do you take everyone's ideas and bring it into one vision? How do you take everyone's busy schedules and find a time to meet? And once the show is ready to perform, how is it the same every night? With every production there is a Stage Manager who serves as the central coordinator of the production from before the first rehearsal to closing night. Stage Managers are responsible for organizing an entire team through the creative process by scheduling meetings, running rehearsals, and creating/maintaining paperwork used by the entire creative team. Most importantly, a stage manager aids communication, making sure information is passed freely through designers, shops, cast, and crew. It takes a keen eye for detail, a good memory, and lots of patience.

Bradley Sutliff: “Aptamer-Linked Nanoparticles to Target Ovarian Cancer cells.” Project Advisor: Nadine Hempel. Department of Nanobioscience.

To overcome the challenges in treatment and targeted drug delivery of ovarian cancer, we tested the hypothesis that the use of novel nanoscale delivery systems to target ovarian cancer will allow for more effective chemotherapeutic treatments. The aptamer AS1411 is a 26 base oligonucleotide that has been shown to bind to nucleolin proteins of cancerous cells, such as those in breast cancer, increasing their own uptake. The binding is due to the unique quadruplex structure that guanine-rich nucleotides can be folded into. To test if this aptamer may also be useful in targeting ovarian cancer, a fluorescent FAM label was added to the aptamer to monitor and quantify the binding of the AS1411 to cells. In the present study we have screened the effectiveness of AS1411 to successfully target a panel of ovarian cancer cell lines, in an attempt to identify this as a novel treatment strategy for ovarian cancer. Future applications may include the linkage of this aptamer to a virus-capsid for nanoparticle drug delivery.

Alex Talamo: “Using bioglycogen dendrimeric nanoparticles as a novel, non-toxic transfection agent to deliver siRNA to ovarian cancer cells.” Project Advisor: Nadine Hempel. Department of Nanoscale Science.

Mitochondrial antioxidant enzyme superoxide dismutase-2 (Sod2) has been linked to tumor progression and chemoresistance. In order to slow the progression of tumor cells and to increase sensitivity to chemotherapy agents it will be necessary to focus on the down-regulation of Sod2 in ovarian cancer. The down-regulation of Sod2 will occur by transfection of siRNA into ovarian cancer cell lines to inhibit Sod2 expression. In the present study we will utilize bioglycogen dendrimeric nanoparticles to transfect siRNA targeting Sod2 into ovarian cancer cell lines. Our hypothesis is that novel nanoscale delivery systems are more efficient and less toxic in delivering siRNA molecules than traditional RNAi transfection techniques. Our present and first goal is to test the toxicity of bioglycogen dendrimeric nanoparticles. The toxicity of the bioglycogen nanoparticles will be compared to Lipofectamine™ 2000 and Lipofectamine™ RNAiMAX on ovarian cancer cell lines TOV21G and ES2. These cell lines are being used because they exhibit high Sod2 expression. The toxicity will be tested by means of an MTT Assay. Once the toxicity levels have been determined we will conjugate siRNA oligonucleotide to these nanoparticles and assess their ability to effectively decrease Sod2 expression. Scrambled siRNAs will be loaded as controls and efficiency of Sod2 knock down compared to traditional RNAiMAX reagent. This study will assess if bioglycogen dendrimeric nanoparticles are more efficient and less toxic in delivering siRNA molecules than traditional RNAi transfection techniques, providing a potential therapeutic avenue to target ovarian cancer.

Adele Touhey: “Questioning the Validity of Accusations Made by China and the U.S. on Cyber-Espionage Activities.” Project Advisor: Anthony DeBlasi. Linguistics and Chinese Studies.

Media reports run rampant with updates on China’s cyber-hacking capabilities and their effects on U.S. privacy and intelligence. Since this is a relatively new form of espionage, little is known about the methods used for collecting intelligence through networks. Because of these difficulties associated with tracking security invasions, a major issue faced by alleged victims and accused perpetrators is how to respond to such attacks. By understanding the background and perspectives of both parties and keeping up to date with current articles on this topic, it becomes clear that the relationship between these two globalizing superpowers is increasingly strained as accusations are made and responses are shrouded in denial. This project serves to bring to light an objective point of view on the actions and reactions of both the U.S. and China. It questions the validity of each party’s actions and how to deal with such allegations.

Welcome and Award Presentations: 3:30 – 4:30
Lecture Center Hallway (by LC 30 and LC 31)

Session I - 4:30-6:00

LC 3A: Presentations

Shaina Bienvenue: “Marian McPartland: Contributions to Piano and Jazz.” Project Advisor: Victoria von Arx. Department of Music.

There are several influential woman composers and performers in the jazz genre during the mid to late twentieth century, one such composer is Marian McPartland. As a jazz pianist, McPartland has contributed much to the conversation and continuation of the jazz genre not only through her time on public radio but more so by her compositions. Her compositions at times would give the

impression of an ethereal ballad and then evolve into a jazz spectacle making them an odd but progressive style. By focusing on her major works, I will attempt to analyze McPartland's style, its major contributing factors to jazz and influence on other musicians.

Being a woman affected McPartland's musical style at the height of her career and ultimately affected her influence on the jazz genre. I will also attempt to explore this further in my presentation by using interviews, articles, and her own autobiography to clarify the effect being a woman in jazz had on her career as well on critical journal articles on the subject of women in jazz and their contributions to the genre.

My presentation will first provide background information on McPartland's life and her experiences as a woman in the musical profession and in the jazz genre. I will then show how her experience as a woman affected her compositions and thereby her career. Then I will attempt to analyze her works to come to grips with her style and explore her contributions to the continuation of jazz.

Sugyan Dixit: "Hiromi Uehara: Rise of Jazz Virtuoso." Project Advisor: Victoria von Arx. Department of Music.

Hiromi Uehara is an uprising jazz pianist who has attained the respect of the jazz community and conveyed new arrays of possibilities in jazz through her compositions. Her compositions reflect the fusion of eastern and western music along with the virtuosity of a formidable composer and a pianist. Also, the Hiromi trio and Hiromi's Sonicbloom band show a broader range of orchestration in jazz music. Hiromi has also attempted to "jazz up" some of the Classical pieces with tremendous improvisation and input of her own. My main objective of this paper is to track down the elements she uses in her compositions to give jazz a notable distinctive sound.

Lauren Kornak: "Iconic Black Composers Scott Joplin's Role in American Piano Music and American Society." Project Advisor: Victoria von Arx. Department of Music.

When one thinks of piano music, often European compositions come to mind. Great piano music also includes American music. The American dream is that everyone and anyone has the opportunity to become a 'somebody', even if they came from nothing. In the beginning of the twentieth century one composer who exemplified an original American sound was Scott Joplin. Through adversity and a passion for music Scott Joplin created ragtime, an entirely original genre to America.

In my presentation I will show how Scott Joplin became a musical icon in his genre. He was very influenced by the socioeconomic and cultural environment he grew up in as a black man, and received a very different musical education than most traditional composers would have because of this. This is what inspired him to create such an original style. However, Joplin was more self-inspired by the hard conditions, financially and socially, and by the music he was exposed to than that of traditional European sounds composers of this time had previously used as models. Joplin did receive some formal training, and took some inspiration from European music, and was inspired to write opera in his later career, but he was far better known for how he took this inspiration, and then went a step further to create something new from his own personal influences. This is what led both to Joplin being dubbed the King of. I will demonstrate how two of his well-known pieces depict what ragtime music was, by playing excerpts of 'Maple Leaf Rag' and 'The Entertainer' by Joplin. America is known as a melting pot. What is more American than taking ideas from music that has been widely popular, but also widely done, and making it new? Joplin found a way to do this for piano music.

Stacy Heller: "Gershwin and Rhapsody in Blue: A Musical Era is Born." Project Advisor: Victoria von Arx. Department of Music.

George Gershwin's Rhapsody in Blue was, and still is an important piece of music that took jazz from a world where it was only played in bars and other "low" culture venues to the biggest concert halls in the world. Rhapsody in Blue accomplished this at its premiere in Paul Whiteman's "Experimental" concert on February 12, 1924 where it was the only piece that people really enjoyed and took seriously. The mission of Whiteman's "Experimental" concert was to bring jazz into a new light and into every home in America. This concert started a renaissance for new jazz compositions that could be played in concert halls.

This presentation will feature three topics: the features of the musical style that Rhapsody in Blue exhibits; the reactions of the critics and the public after the premiere performance with Paul Whiteman; and the influence of Rhapsody in Blue on other composers. In my presentation we will explore Gershwin's musical masterpiece, Rhapsody in Blue. We will listen to excerpts of this piece which highlight the musical style.

Kevin Judd: "Henry Cowell." Project Advisor: Victoria von Arx. Department of Music.

Henry Cowell was a brilliant and innovative composer. He was a writer, a performer, a publisher, and a teacher in the early to mid 20th century. He invented multiple original piano playing techniques. John Cage (a student of Cowell) described him as "the open sesame for new music in America" In this presentation I will use Cowell's compositions to show how he used tone clusters and his other techniques to make innovative music. I will talk about the techniques he used in his music and the many composers he influenced such as John Cage, Lou Harrison, Conlon Nancarrow, and Karlheinz Stockhausen.

LC 3B: Presentations

Alvin George: "Galanin's effects in Alzheimer's Disease: Potential approaches to countering cognitive impairments." Project Advisor: Ewan C. McNay. Department of Psychology.

The expression of the neuropeptide, galanin, is significantly higher in obesity and Alzheimer's Disease, than an healthy individual (Counts et al., 2003). Cognitive deficits result from over-expression of galanin in transgenic mice (Crawley, 2008), in addition to increased body weight and, in some cases, hyperinsulinemia and impaired glucose tolerance (Poritsanos et al., 2009). There are many studies indicating that these galanin-related impairments have consequences for insulin signaling and related pathologies; however, few have gone into detail concerning whether its expression is regulated by insulin. The goals of this study is to elucidate the effects of inefficient insulin binding on the levels of galanin, its receptors, and key components of signaling cascades vital to learning and memory.

Prince Jacob: "Identification of modified nucleotides in viral RNA genomes by mass spectrometry and the L-A dsRNA virus as a model." Project Advisor: Daniele Fabris. Department of Biology.

Nucleotide modifications have been categorized for all three primary domains of life: eukarya, eubacteria, and archaeabacteria. RNA stability, structure, function, and dynamics can be dependent on nucleotide modification. rRNA is modified for catalysis while tRNA is modified for structural support, which prevents frameshifts during translation. Mass spectrometry is an outstanding tool for observing nucleotide modifications. The identity of modified nucleotides can be affirmed by tandem MS.

The modification of RNA viruses has had very little investigation. This is due in part to the scarcity of analytical techniques with appropriate sensitivity to detect such modifications, as they do not survive typical amplification techniques such as PCR. The introduction of nano-ESI FT-MS allows detection on the low attomolar level, which supports the investigation of *in vivo* viruses.

The yeast dsRNA viral system L-A provides an easy model to exploring RNA modification in viruses. Methods developed on the L-A virus will be used to investigate possible modifications in the HIV-1 genome. As opposed to the difficulties in analyzing HIV-1, yeast can be grown in large quantities to yield sufficient viral RNA for method development and exploration. Sampling care will be refined to account for this. Ultracentrifugation allows for pure viral RNA to be collected, which can be digested to. Direct infusion on a Thermo LTQ Orbitrap Velos is used to explore the modified nucleotides present in the viral genome.

Zachary Olmsted: "From Yeast to Human: Novel Insights Into Control of Mitotic Spindle Assembly Through Functional Regulation of the Microtubule Organizing Center." Project Advisor: Janet Paluh. Department of Nanoscale Engineering.

In unicellular and multicellular eukaryotes, an internal network of biological polymers called the microtubule cytoskeleton serves as both a structural framework and communication pathway. Microtubule assembly, dynamics and organization must be precisely controlled in order to generate specialized structures that permit unique cell functions. These parameters are controlled by a universally conserved protein complex called the microtubule-organizing center (MTOC). Understanding regulatory mechanisms of MTOC function is of fundamental importance as this complex is central to many cellular processes that include chromosome segregation, fertility, neural development, T-cell cytotoxicity, and respiration. My research in the Paluh lab uses the model yeast system in addition to human stem cells to dissect MTOC control of microtubule nucleation and organization. Recently, we resolved the first known regulatory mechanism of an MTOC by the yeast Kinesin-like motor protein, Pkl1, that shares sequence and functional overlap with the human motor HSET and suppresses the formation of a bipolar spindle in mitosis. Additionally, we used cross-species and chimeric analysis to test functional conservation of human MTOC proteins in yeast. Such work is revealing key insights into MTOC regulation for control over spindle assembly and is expected to play a key clinical role in cancer therapy and other mitotic diseases.

Jennifer Pollard: "Implications of Tanzanian Culture on Nutrition and their Effects in People Living with HIV/AIDS." Project Advisor: Timothy Gage. Human Biology.

Many Africans living with HIV/AIDS also suffer from malnutrition. Together, HIV and malnutrition greatly compromise the immune system of an individual, each condition increasing the effects of the other. This field study examines the Arusha region of Tanzania where approximately 5.6% of the population is infected with HIV/AIDS and 45% of children exhibit stunted growth, indicating chronic malnutrition within the population. The purpose of this thesis is to explore cultural factors that may be intensifying the effects of interactions between malnutrition and HIV on individuals in Arusha. Specifically, gender inequality, knowledge levels, and cultural traditions of the Maasai (the predominant tribe in the Arusha region) were analyzed in their contributions to malnutrition and HIV. The study was conducted over three months in Arusha through observation, interviews, knowledge surveys, and online databases. International data analyzed show a positive correlation between HIV mortality rates and malnutrition, with Tanzania being

near the upper limits of both. Results from interviews and surveys support the theory that combined cultural effects are contributing to rapid deterioration of the immune system through HIV and malnutrition.

LC 3C: Presentations

Stanley Abraham: "Direction of embryonic salivary gland development and differentiation by Rac1." Project Advisors: Melinda Larsen and Sharon Sequeira. Department of Biology.

Embryonic submandibular salivary glands (SMGs), like many other branched organs, including the lungs, kidneys and pancreas, develop through the processes of branching morphogenesis, tissue polarization and differentiation. Together these processes result in the formation of a highly branched, fully differentiated saliva-secreting adult gland. The signaling molecules responsible for regulating SMG branching morphogenesis during early development are not fully understood. Rac1 GTPase, a key member of the Rho GTPase family has been shown in non-salivary cell types to regulate epithelial morphogenetic processes including, proliferation, and cell-cell adhesions involving adherens junction proteins. We therefore sought to determine the importance of Rac1 in SMG development. In order to accomplish this, we used two structurally different chemical inhibitors of Rac1 activation, NSC23766 and EHT1864, as well as genetic knockdown using Rac1 siRNA. Using Western blotting techniques we found reduced expression of the proliferation marker, phospho-Histone H3 and the cell-cell adhesion marker, E-cadherin, indicating that Rac1 activation is required for SMG proliferation and cell-cell adhesion. Morphometric analysis also indicated a significant decrease in epithelial budding, implicating a role for Rac1 in SMG branching. In addition, apico-basal polarity was disrupted as evidenced by immunostaining and confocal microscopy for the apical markers E-cadherin, ZO-1 and Na⁺/K⁺ ATPase and the basal basement membrane matrix protein, collagen IV. Finally, to test whether Rac1 GTPase activity is also required for SMG differentiation at later stages of SMG development, we examined the expression and localization of well-established SMG differentiation markers such as, Aquaporin-5 (acinar), Keratin 14 and α -smooth muscle actin (myoepithelial) in untreated and Rac1 inhibitor-treated or siRNA-treated E13 SMGs cultured for 96 hrs ex vivo or in ParC10 acinar cell lines. We found that perturbing Rac1 function caused decreased expression and most interestingly mislocalization of AQP5 to the outermost columnar cell (OCC) layer instead of the inner more apical cells as would be expected. We also found reduced expression of K14 and α SMA in the OCC layer but increased α SMA in the surrounding mesenchyme. These results indicate that Rac1 is required for both acinar and myoepithelial cell differentiation. Together, our results uncover novel functions for Rac1 GTPase during SMG development and have important implications for the future treatment of salivary gland diseases such as Sjogren's syndrome, in which Rac1 expression is deregulated and gland polarity and differentiation are compromised.

Alexandra Briggs: "The Effects of Callous Unemotional Traits in Children on Adulthood Criminality with a Moderator of Therapy." Project Advisor: Allison Redlich. School of Criminal Justice.

While studies have shown that many variables contribute to the development of criminal behavior in children, this study will focus primarily on the effect of Callous-unemotional (CU) traits in children. CU traits refer to a specific affective and intrapersonal style that is characteristic of a particular subset of children with severe conduct problems. CU traits include lack of guilt, remorse, emotionality, and empathy, manipulation, and a reward dominant response style (Barry and Frick, 2000). Furthermore, there is evidence to suggest that the presence of CU traits in children are stable, and resemble psychopathic traits that are exhibited in adult psychopaths (Blonigen, Hicks, Kruger, Patrick, and Iacono 2006). This present study is a longitudinal study in which every 3 years until these children reach the age of 35 their degree of psychopathy will be assessed through a survey. In addition, their criminal records will be examined yearly. The purpose of this study is to identify a subset group of children with CU traits and offer half of them cognitive behavioral therapeutic intervention as means of a moderator to reduce the likely hood of the child developing psychopathy as an adult and engaging in violent criminal behavior in adulthood.

Ian Andrew Lepkowsky: "Social Media Fetishism: The Substitution of Life and Disavowal of Death." Project Advisor: Mary Valentis. Department of English.

In the past decade, social media has become fetishized by a select group of users, characterized by hours a day spent on these websites, and failed attempts to delete accounts permanently. The paper starts by tracing the history of fetishism through the anthropologist William Pietz, Karl Marx, and Sigmund Freud. From there, we continue to analyze fetishism through the perspectives of Guy Debord, Jean Baudrillard, and Louise Kaplan, authors of Cultures of Fetishism. This discourse leads us to social media as the current manifestation of a symptom that has plagued society for centuries. Here, we take a look at Facebook and Twitter, as well as other social media forms, in order to understand how and why we are drawn to this type of fetishism. Ultimately, we come to the conclusion that these fetishes are manifestations of our fears of life and death, as we attempt to control the unknown.

Rochel Rubin: "Cold as an Entity." Departments of English and Psychology.

Cold is avoidance of heat. The role of this research is to challenge that understanding in a way of supporting the notion that cold is an entity of its own. Research in temperature gradients and the role and function of vacuum is necessary to further develop the action and/or role of cold. Delving into the foundations of thermo-physics and thermo-dynamics is necessary to develop the framework in which cold is currently understood. Study in the action of heat in thermodynamics as well as the role of cold in thermodynamics is another aspect of this research that will assist in sharpening the hypothesis to a specific area of action. Additional interest is in the interaction between cold and heat in general with regards to the effect and interaction of cold and heat on environment, buildings and humanity are further elements of research hoping to cover throughout this quest. Relevant research literature will mostly be online based and include research articles and University based websites. Research will also be guided by several textbooks regarding physics in general and thermodynamics in particular, as well as additional support from the Physics tutoring lab.

Ashley Bishop: "Circus Ecuado." Project Advisor: Walter Little. Department of Anthropology.

Told through the perspective of a young, female on leave from university in the US, "Circus Ecuador" details an Ayahuasca ceremony performed within the Amazon rainforest of Ecuador by an indigenous Shuar community. Ayahuasca, a bitter brew made from the Banisteriopsis caapi vine, has been the cornerstone of religious activity for the inhabitants of the Amazon jungle for centuries. The psychoactive compound is used to access deeper channels of consciousness and to elicit spiritual healing within participants. As practicing communities become more reliant on global flows of capital, ceremonies such as this are being offered up to the tourist industry with increasing frequency. It is within the give and take of this cross-cultural space that the author found herself while traveling through Ecuador with two, small NGOs local to Albany, N.Y. Witnessing the differing prescribed cultural norms found within the culture of the Shuar community and that of the Western NGOs bumping up against one another prompted the author to critically evaluate the interactions taking place between these communities within the context of this ceremony. In reflecting on these experiences, the author has also been able to turn this same critique inward so as to make commentary on the experience of being a student of Anthropology and attempting ethnographic research for the first time.

Saturday April 27, 2013

Session II - 12:00-1:30

LC 3A: Presentations

Daniel Levy: "James P. Johnson and his Influence on Modern Jazz." Project Advisor: Victoria von Arx. Department of Music.

Jazz music is a complex and free expression, an art based off the sole idea of creating something anew. Jazz, much like classical music, is one of the greatest influences on modern music whether used by a fusion artist or a metal band. One of the most significant influences on the jazz movement was a composer by the name of James P. Johnson. Without this man, the jazz we know today would not come to exist. Johnson had taken the ragtime pop and created something new, adding a swing feel and using freer rhythmic expression in the left hand. These ideas expanded and were mixed and stirred by different composers and pianists with different playing styles to create jazz in the long run. My goal is to discuss this evolution by using analyzations of Johnson's music and figuring out exactly what formed this changed. This includes everything from the use of tenths and walking bass to the almost classical virtuosity of the melodies in the right hand. Johnson's musical prowess had been shown through his many compositions whether they be for solo piano or for an entire orchestra. And again, without Johnson's widespread variety of pieces and musical styles, jazz would not exist in its current form.

Katie Schimanski: "Leo Ornstein and His Impact on Futurism." Project Advisor: Victoria von Arx. Department of Music.

In the early twentieth century in Italy, the futurism movement took control of the art world and affected many composers and musicians of the piano. The desire for freedom from traditional musical structures caused composers such as Igor Stravinsky to create music that referred to the mechanical sounds of the factory, which had become a large place of employment. Leo Ornstein was heavily influenced by the futurist movement, and his music helped develop the futurist shift towards tonal clusters and incredibly dissonant sounds within his compositions.

In my paper, I plan to examine the futurist movement and determine what it really means to write a "futurist" piece for the piano. Also, I will study Ornstein as well as examine his pieces to see how Ornstein contributed to the movement and what future

musicians took away from that. Ornstein's early music was an important part of the futurist movement, and the insight that Ornstein brought to the futurist movement is essential to understanding the movement as a whole.

Deidre Pinkerton: "Jazz Influence on Classical Music." Project Advisor: Victoria von Arx. Department of Music.

The Jazz Age which started in the 1920s was a period when jazz music and dance became popular. Jazz in the 1920s revealed a generation wavering between the conventional society of nineteenth-century America and the modern culture arising in the early twentieth century. The acceptance of jazz illustrated how much Americans rejected or accepted traditional values. During this time jazz music, which was principally credited to African Americans, became socially acceptable to white Americans as well. Jazz became an influence on American composers such as Leonard Bernstein, Aaron Copland, and George Gershwin who combined elements of jazz with classical styles.

In this paper I will give a comparison between stylistic features of concert music and jazz and explore how American composers used both to create a new style of music. While classical music is more controlled and has a set structure, jazz is more loosely composed and includes improvisation. I will talk about how classical composers started to branch out from their traditional training and began to incorporate elements of jazz and how jazz music incorporated elements of classical music as well. I will be focusing on American piano composers who combined these styles. For example George Gershwin's *Three Preludes* (1926) contain jazz influences. Also Aaron Copland *Four Piano Blues* and George Antheil *Jazz Sonata* both show evidence of jazz influences although they were considered classical composers.

LC 3B: Presentations

Fatima Aboul-Seoud: "Factors Affecting the Detection of Relationship Status Deception." Project Advisor: Gordon G. Gallup Jr. Department of Psychology.

Evolutionary theory predicts that people should have sex-specific adaptations based on differential reproductive costs and benefits. Males have to contend with the costs of being cuckolded, while females have to contend with the costs of being abandoned. Previous research on reproductive deception has shown that males and females engage in sex-specific deception in ways that maximize fitness (Tooke & Camire, 1991). This project examined the ability to discern ingenuous and disingenuous claims about romantic and sexual relationship status. Participants viewed and rated the veracity of pre-recorded claims about targets' relationship status. Results showed that the ability to discern claim veracity was dependent upon the type of claim that was made, whether the claim was true or false, and the sex of the claimant and the rater. Findings provide important additions to the literature on reproductively relevant deception.

M. Siobhan Webber: "Open Source and Libraries: An Overview." Project Advisor Carol Anne German. Department of Information Science.

Open source software applications are among the most popular trends in current library research over the last ten years. This research paper seeks to examine the following: the decision process in choosing an open source Integrated Library System (ILS), how this compares to its proprietary counterparts, what the implementation of such systems involve, general perceptions of the use of open source products within the library community, and finally, how academic libraries are using open source software applications. This research analyzes a review of the literature, including scholarly articles and other resources reporting on direct experience of libraries using open source software applications. A survey of the Capital District Library Council (CDLC member academic libraries was conducted in order to ascertain the use of as well as perceptions of open source software. The results concluded that perceptions of open source technologies are generally favorable. Results also indicate that libraries that use open source also possess a strong IT department. In addition, further research is needed to measure current trends of the use of open source software within the library community. This research project was conducted as an independent study under Professor Carol Anne Germain and through IRB approval and advisement.

James Thompson: "Pity and AIDS: Performative Ethics." Project Advisor: Charles Shepherdson. Departments of English and Psychology.

An innocuous phrase like "I pity you," exemplifies the power of language to create complex relationships: the subject "I" is distanced and differentiated from the object "you" through the action "pity." In its modern use, the action "pity" connotes contempt, and represents the subject's adjudication of an object as deserving of the tragedy that has befallen them, creating a non-traversable distance. However in its ancient application, the action "pity" connoted empathy, and represented the judgment of an object, by a subject, as undeserving of tragedy, creating a distance that can be transcended, enabling the subject to understand the plight of the

other.

My intention is to consider how the discourse of AIDS, through performative actions like mourning, memorialization, witnessing, surviving and testifying, can foster moral, ethical, social and cultural education. Further, I will evaluate how the representation of AIDS through spectacle (seeing, hearing, watching, and performing) can be both therapeutic and prophylactic. This will be accomplished through the use of seminal texts by psychoanalytic queer theorists Leo Bersani, Douglas Crimp, Tim Dean and Lee Edelman, in combination with articles examining the relationship between AIDS and expressive discourses, such as performance, storytelling, testimonial writing, and symbolic memorialization.

LC 3C: Presentations

Cortney von Hahmann: "Diastereoselective synthesis of pentafluorosulfonylated β -lactams, precursors for docetaxel modification."
Project Advisor: John T. Welch. Department of Biology.

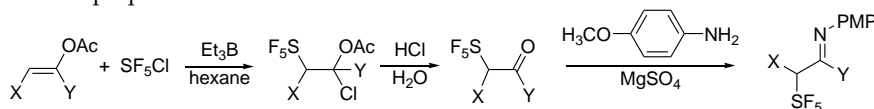
The goal of this research is the exploration of the effect of dipolar interactions on the diastereoselectivity of the ketene-imine cycloaddition reaction and to employ that diastereoselectivity in the preparation of 3-amino-2-hydroxy-3-pentafluorosulfonylpropanoic acids.

The calculated dipole moment for the SF₅ group, 3.556 Debye, is nearly a third greater than even the strongly withdrawing CF₃ group, 2.5896 Debye. The dipolar influence of the SF₅ group may be among the largest known. From preliminary results in our lab there is evidence for the importance of polar and field effects on reactions involving SF₅-containing reactants. While the Felkin-Anh model, used to describe diastereofacial discrimination between the faces of a dissymmetrically substituted carbonyl, is widely accepted, this model fails in some cases even when combined with the contrary Cieplak picture. However the attribution of selectivity solely to desymmetrization of the reactant orbitals by either of these methods may be artificial. Selectivity is likely influenced by electrostatic field effects, i.e. the influence of a remote polar substituent such as an SF₅ group transmitted by σ -inductive effects or by through-space interaction of the substituent dipole.⁹

More than 40 years ago, the stereochemistry of hydride addition to a carbonyl group with polar substituents was reported to be influenced by charge development in the transition state. In acyclic systems the transition state with the lowest overall dipole moment was favored leading to stereocontrol.¹

Electrostatic influence on electrocyclic reactions has been revealed in contrastreric "torquoselectivities". This general effect is observed in the ketene-imine cycloaddition reactions where the asynchronous transition states and greater charge separation is more easily influenced by dipolar substituents.

Initially we explored the reaction of both pentafluorosulfonylated aldimines and ketimines in the Staudinger reaction (ketene-imine cycloaddition reaction). The Staudinger reaction and the general utility of the product azetidinones in synthesis is well-summarized. The mechanism of the cyclization is normally ascribed to a highly asynchronous conrotatory [2+2] cycloaddition process. The required imines were prepared as shown.



- a X = H, Y = H
- b X = Me, Y = H
- c X = Et, Y = H
- d X = C₇H₁₅, Y = H
- e X = H; Y = CO₂Et

Anna Mondello: "Bliss in Barnes: How a Loss is Still a Gain." Department of English.

My paper is a discussion on Djuna Barnes' novel *Nightwood* and *The Pleasure of the Text* by Roland Barthes. Through the lens of the character of the Doctor in *Nightwood*, I examine how Barnes speaks back to Barthes's definition of bliss and affect. The main idea behind this discussion is how Barnes' exploration of agency in her novel allows both the reader and the novel to look at themselves critically. I use the Doctor as a microcosm of the novel as a whole; just as he is able to look at himself, so too does the novel. He is chased throughout the novel by characters wishing to attain bliss, much like readers constantly chase bliss through the act of reading.

However, can a novel give bliss? According to both Barnes and Barthes, bliss is a loss that is gained, like adding a negative number—you lose value. Can a reader chase bliss in a novel and, hopefully, attain it? By the paper's end, I conclude that Barnes leads the audience to question what they are really chasing in a novel, and that both pleasure and bliss are equally attainable. Ultimately, the thing that matters is the chase, not what is gained (or lost) in the end.

Smriti Sinha: “Katha Revisited: The Story Behind the Story.” Project Advisor: Allison Craig. Department of English.

Given an opportunity to write a science fiction (SF) short story, and being Indian, I had to marry the two. Indian SF is a young, small field and there are very few Indian SF authors – Samit Basu, Vandana Singh, and Rimi Chatterjee to name a few. Even fewer are works written through an Indian cultural lens.

Science Fiction, or, as a subcategory, Speculative Fiction, can cover tropes like utopian or dystopian societies, alterations to historical events, steam punk and mythology. In this SF short story I set up a futuristic, utopian Indian community. The protagonist travels back in time, as a voyeur, a historian, a cultural recorder. She observes Hindu mythological events, learning the scientific truth behind the stories that have been passed down through hundreds of generations. This fictional piece will require research of Hindu mythologies, and when the myths were recorded, particularly in the written form. This research involves reading various Hindu myths, interviewing elders in the Indian community who are familiar with Hinduism, and watching animated/film interpretations of the myths.

Session III - 1:30-3:00

LC 3A: Presentations

Franklin Berkeley: “Jelly Roll Morton.” Project Advisor: Victoria von Arx. Department of Music.

They have been many musicians who have developed Jazz music, through new ideas, and compositions. Jelly Roll Morton was one of those pioneers, a talented composer. Morton took different elements of music in New Orleans such as ragtime, blues, minstrel show tunes, Hispanic music and white popular songs. He used those ideas to develop and create a different sound and called it jazz music. Some of these compositions included “King Porter Stomp”, “Wolverine Blues”, “Milenburg Joy” and “Chicago Break – down” just to name a few. He self- declared himself the best pianist ever and the creator of “jazz” .

Jelly Roll Morton was born Ferdinand P Lamothe on October 20, 1890 in New Orleans, which is considered to be the birthplace of Jazz. He began playing music at a young age. He started playing in sporting houses, even though his grandmother didn’t approve. He continued to work on his craft and expanded on some of his works such as “Wild Man Blues”, and “Georgia Swing”, most of his creations were more than thirty two- bar tunes or twelve- bar blues.

In this paper, I plan to share some of the story of Jelly Roll Morton and how his contributions influenced Jazz music, as we know it today --those contributions he incorporated led him to become one the most renowned composers of jazz music. Using “King Porter Stomp”, and “Chicago Break –down” I will show this through his musical innovations, compositional style, as they relate to jazz.

Jacob Crofoot: “John Cage and His Prepared Piano.” Project Advisor: Victoria von Arx. Department of Music.

John Cage (1912-1992), a pianist and composer, found ways to alter the sound of the piano, bringing out a percussive character that was completely new. He accomplished this through experimentations with the piano, such as placing a metal plate on the strings, and placing objects such as nuts, bolts, and rubber erasers in between the strings. He embarked on these experiments when asked to compose music for a dance. The result was a piece called “Bacchanale,” the first piece composed for the “prepared piano.” The objects that Cage placed on the strings change the timbre of the piano, and make it sound like an entirely different instrument. When a piano is altered this way, it is called a prepared piano. Cage went on to compose many pieces for the prepared piano.

Cage had started composing for the prepared piano in 1938, and the last piece he composed for prepared piano was in 1954. I will explore Cage’s motivations for creating his “prepared piano,” his music education and his influences, and his compositional process. The pieces I have selected as illustrations are “Bacchanale,” his first prepared piano piece, selections from his most famous prepared piano works known as Sonatas and Interludes, and “Two Pastorales,” examples prepared piano pieces composed as chance music.

Natalya Mokhor: “Mary Lou Williams and Jazz.” Project Advisor: Victoria von Arx. Department of Music.

While many famous women in jazz, such as Billie Holiday and Ella Fitzgerald were singers, Mary Lou Williams (1910-1981) became an accomplished pianist, composer and arranger. I will play several pieces and excerpts of pieces composed by her in order to illustrate the various styles in which Williams composed – jazz, spiritual, ragtime, swing, boogie woogie and bebop. I will also talk about the role she played in the jazz bands she was involved with, particularly the Andy Kirk band, and how she impacted the lives of other musicians.

Sahan Shrestha: “Art Tatum.” Project Advisor: Victoria von Arx. Department of Music.

Nearly blind, Art Tatum was one of the greatest improvisers in Jazz history. He was a virtuoso pianist who developed his playing in the style of swing and stride and transformed the music with his virtuosity. As the authors Felicity Howlett and J. Bradford Robinson have written, "Simple decorative techniques became complex harmonic sweeps of color; traditional repetitive patterns became areas of unpredictable and ever-changing shifts of rhythm". His light touch on the piano and his control of the full range on the piano was a work of genius. In my presentation, I will use excerpts from Tatum's performances of 'Yesterdays' and 'I've Got Rhythm' to show how he incorporates virtuosic elements like runs up and down the keyboard and illustrate his techniques of shifting rhythms.

LC 3B: Presentations

Sebastian Agosti: "The 'Dirty War' in Argentina." Project Advisor: David Lisenby. Department Languages, Literatures, & Cultures (Spanish).

During the late 1970s Argentina was governed by a conservative military dictatorship that violently repressed political opposition during what was known as the "Dirty War" where thousands of citizens were kidnapped and murdered. I will be comparing different plays, novels and movies from the post dictator times and in South America, especially in Chile, Argentina and Uruguay. I will be looking at how the authors reflected the idea of ignorance and blindness of the people towards what was happening at the time. These literally works and films present the topic of abuse, torture and social and political repression from different points of view and different moments in time in the life of its characters.

I will analyze what allowed people to ignore and overlook evident signs of what was happening, during the time of the repression, and what part did fear, misinformation, manipulation and social status play. I will also analyze the effect that the events have on the people's memories; how are these affected by the fact that there is very few or none tangible evidence to the whole process, since the core of the issue lies on what is missing, persons, stolen lives, futures, etc. For this reason memory plays a fundamental part of seeking understanding and justice. I will be using several characters and tying them together comparing them trying to find common aspects and how together they make up a common attitude at the time and in the post dictatorship.

Samantha Arpino: "Chasing Perfection: Exploring the Impact of Popular Culture's Formation of "The Ideal Woman" on Women in the Contemporary United States." Project Advisor: Barbara Sutton. Departments of Woman's Studies and Communication & Rhetoric.

Popular culture is widely influential in the United States; many of us gather an understanding of who we are and who we "should be" by society's standards through representations in popular culture. Media and popular culture have had a significant effect on women in the United States, as many of the images aimed towards women are paradoxical or conflicting in nature. Through a feminist content analysis of 20 songs featured in the "Top 100 Billboard Songs of All Time", as well as through a literature review, I aimed to find out if representations of what it has meant to be "the ideal woman" over time in the contemporary United States (c. 1968-present day) have changed significantly, and what these representations imply about the various aspects of women's lives. Through my literature review I have found that media and popular culture do play a significant role in how women view themselves and the world around them, in some cases including a shift in behavior and mood after being exposed to said media. Through my content analysis I have found that two trends have maintained steady throughout this period: representations of women as weak or dependent, and representations of women as strong or empowered. This conclusion draws on the aforementioned paradoxical nature of representations in media.

Luis Gabriel Sanchez: "Andean Cosmologies in the Ontological Crisis of the 21st Century." Project Advisor: Fernando Leiva. Department of Latin American, Caribbean, and U.S. Latino Studies.

Sustainability is a condition many individuals and societies seek as part of a larger project to modernize and advance civilization. The failures and shortcomings of this project of modernity are evident in the persistent inequality and poverty in our societies, a series of abuses against the Earth that negatively impact our lives, and the marginalization of too much of humanity from the benefits of globalization. Recognizing the presence of crisis in maintaining these blemishes on our existence, followed by legitimizing alternatives to crisis and the creation of new theoretical tools to combat crisis is the focus of this project put forth in three essays and an online recourse collection. The crisis of civilization and its unsustainable ethics is the theme of the first essay; the reaction and attempts to adapt to the crisis practiced in Ecuador as part of a large project based on indigenous philosophy is the focus of the second; and finally the reforming of democracy to be substantively inclusive in an egalitarian sense by fusing indigenous and Western ideas is the content of the third. Tapping into knowledge that was formerly omitted from discourses of progress is the underlying goal of this project, with the hope that those alternatives will be useful in coping with or ending alright cycles of crisis

Nikoleta Papa: "Language Contact and Variation in the Spanish of Catalonia." Project Advisor: Lotfi Sayahi. Linguistics.

The subject matter of this study is the variation in the use of Spanish language in Catalonia, a bilingual region of Spain. Catalan has been spoken in the history of the region for centuries and is recognized today as a co-official language of Castilian in the Catalanian area. The goal of this project is to note any common patterns of Spanish language production in Castilian/Catalan bilinguals. This study aims to distinguish if Castilian presents Catalan loanwords and if code-switching is common.

The results of this study came mainly from field work done with individuals living in Barcelona. For this study, interviews and conversation with seventeen individuals of various backgrounds served as a basis for observation. Interviews were based on a questionnaire. Conversations in groups or conversations that were longer were recorded for playback. The basic questionnaire involved questions of background and origin and asked for a brief assessment of an individual's knowledge of each language. Then, open ended questions were asked based on the respondent's experience living in the region and observations of those around him/her. Finally, analysis was based on a compilation of information that was mainly collected from personal interactions with residents of Barcelona and readings published by authors on the subject matter. Results were classified by variation on the word level, variation in phrases, variation in verb use, and other prominent distinctions of language use in Catalonia. The finished project includes tables, charts, and maps to better familiarize the reader with the distinctions of the region.

Mathew Weiss: "Explaining Revolution to Children: The Influence of Domestic Radicalism on the Portrayal of Russian Radical Intelligentsia in Anglo-American Children's Literature, 1925-1935." Project Advisor: Kendra Smith-Howard. Department of History.

This presentation examines the portrayal of the Russian radical intelligentsia in American and British children's literature between 1925-1935. Historian Julia Mickenberg argues that children's literature proves particularly effective for assessing the prevailing beliefs of a particular period because it seeks to instill in its readers the dominant cultural attitudes of the time. Anglo-American children's literature written between 1925-1935 commonly depicted Russian intelligentsia as agitators who sought to overthrow the Tsarist government by radicalizing the peasantry and attempting sabotage. These portrayals primarily reflect British and American anxieties about the role of the domestic far left in fomenting worker's unrest and engaging in foreign-sponsored sedition. Ultimately, this presentation intends to prove that attitudes towards radicals at home, rather than attitudes towards Russia and its revolutionaries, determined portrayals of the Russian intelligentsia in children's literature.

LC 3C: Presentations

Justin Coon: "Nanochemoprevention of breast cancer: Enhanced delivery and anticancer effects of pomegranate polyphenols in breast cancer cells." Project Advisor: Ramune Reliene. Department of Biology.

Fruits and vegetables have a myriad of chemopreventive compounds, most notably polyphenols. We, and others, have shown that pomegranate extract and its individual polyphenols inhibit growth of human breast cancer cells. These studies suggested that pomegranate may be a promising chemopreventive agent against breast cancer. However, low bioavailability of plant polyphenols is a key limiting factor in the success of cancer prevention by natural products. Recent studies have shown that green tea polyphenols that are encapsulated in biodegradable polylactic-poly glycolic acid (PLGA)-nanoparticles can have over a 10-fold increase in suppression of cancer cell growth when compared to the aqueous suspension of green tea polyphenols. Nanoparticles offer an efficient delivery mechanism of compounds characterized by low absorption because they are designed to enhance cellular uptake. In addition, it is possible to customize these particles to target a specific organ, tissue, or cell. In this study, we will determine the effect of PLGA-nanoparticles loaded with pomegranate extract and/or pomegranate polyphenols, punicalagin and ellagic acid, in comparison to equivalent concentrations of aqueous solutions of the respective compounds on breast cancer cell growth. This study will provide a proof-of-principle to the concept that nanodelivery may enhance bioavailability and reveal full chemopreventive potential of pomegranate polyphenols.

Kathryn Fanning: "Antibiotic intolerance and resistance: Aminoglycoside binding to bacterial and human ribosomal RNA targets." Project Advisor: Paul Agris. Department of Biology.

Antibiotics are designed to stop internal and topical bacterial infections of humans. Unfortunately, overuse of antibiotics has led to the development of resistant organisms, the most widely known being methicillin resistant *Staphylococcus aureus*, MRSA. A class of antibiotics, aminoglycosides (such as streptomycin, neomycin) have the potential of being altered to combat antibiotic resistance. However, aminoglycosides are also known for their toxicity to humans.

This toxicity is due to the antibiotic effect of aminoglycosides. They bind to the protein synthesizing machinery, the ribosome, of the targeted bacteria and kill the bacteria by stopping the synthesis of proteins. Unfortunately, antibiotics also bind to the protein synthesizing machinery of human cells. Aminoglycosides are effective antibiotics tolerated by humans only when there is a significant differential binding of the bacterial versus human ribosome. Improvements in aminoglycoside effectiveness require an in depth understanding of the differential binding to the bacterial ribosome. I have undertaken an investigation of the differential binding of the aminoglycoside antibiotics gentamicin, apramycin, and kanamycin to the *Escherichia coli*, human cytosolic and human mitochondrial ribosomes using modern biochemical methods.

Rajan Kumar: "Molecularly imprinted polymers for development of an in-situ biosensor." Project Advisor: Magnus Bergkvist. Department of Nanoscale Science.

Molecularly imprinted polymers (MIP), are mimics of antibodies, enzymes, and small molecules that offer a stable and reproducible platform for biological sensing. An analyte of interest can be embedded into a polymer pre-cursor mix, which after curing and washing leaves a polymer scaffold with a molecular imprint of the analyte. MIP typically has high affinity for the molecule it was imprinted with (lock and key concept) and can function as a selective membrane if integrated on a sensing platform. The technology offers a generic approach to sensing where a base polymer material can be used to generate a biosensor array for multianalyte detection. Rajan's role in the project is to develop various oxidative polymerization MIP systems, and evaluate their ability to selectively bind target using electrical based sensing schemes (primarily impedance) and mass-based measuring techniques (quartz crystal microbalance). Target analytes of interest are glucose, glutamine and lactic acid, which are all important metabolites large scale cell cultures using bioreactors. The goal is to develop a real-time in situ sensing system for food process monitoring and biopharma industry.

Alex Schin: "The Role of the functional domains of the human RNA helicase RCK/p54 on hepatitis C virus gene expression." Project Advisor: Cara Pager. Department of Biology.

More than 180 million individuals worldwide are infected with hepatitis C virus (HCV), where chronic HCV infection increases the risk of cirrhosis, fibrosis and hepatocellular carcinoma. We have recently demonstrated that the human RNA helicase RCK/p54 affects HCV gene expression and assembly of new virus particles. In cells, RNA helicases help untangle RNA and/or rearrange the associations between RNA and proteins. RCK/p54 specifically functions to store and/or degrade cellular mRNAs. Conserved regions within RNA helicases direct the binding of RNA, untangling of RNA, the ability to bind the energy molecule ATP, as well as the ability to harness and use the ATP energy. Well-characterized mutations known to block activity of the conserved regions have been described. The objective of Alex's project is to recapitulate these mutations in RCK/p54, and examine the effect on the wholeness and activity of RCK/p54.

Session IV - 3:15-4:30

LC 3A: Presentations

Julie Ann Bingham: "Walking Corpses & Conscious Plants: Possibilist Ecologies in Graphic Novels." Project Advisor: Eric Keenaghan. Department of English.

In "Walking Corpses & Conscious Plants: Possibilist Ecologies in the Graphic Novel," I examine how graphic narratives have historically been used to express political concerns; I then rate the impact of two contemporary works which imagine planetary crisis in relation to this context. Working with Robert Kirkman's *The Walking Dead* and Alan Moore's *Saga of the Swamp Thing*, I aim to illustrate that the violent worlds depicted in each fiction attest relevant social critique. As a frame for this analysis, I turn to the work of philosopher David Kellog Lewis. Using his model of modal realism, I argue that engaging ideas of alternate realities through graphic narratives can be beneficial to stimulating questions of political discourse among readers that might not arise otherwise.

Beginning with a consideration for early examples of sequential art and their social functions, the first of my three chapters builds a foundation for understanding how the modern comics form came into being. Next, I focus my attention upon the significance of the portrayal of violence in my two primary texts. Both works imagine spaces of total war but portray this experience through vastly different perspectives. Mainly, my analysis of Kirkman's work concerns how the presentation of the human body is linked to suicide bombers and the terrorist attacks of September 15th, 2001. Here I apply the work of philosopher Adriana Cavarero, author of *Horrorm: Naming Contemporary Violence*, citing Kirkman's post-apocalyptic universe as a symptomatic expression of cultural concerns regarding ceaseless conflict and erasure of identity. Conversely, my interest in Moore's *Saga of the Swamp Thing* is motivated by his fusion of awareness into the environment. Moore's monumental revival of a marginally successful superhero demonstrates that certain themes, like natural preservation and dependency, may become more pertinent to discuss with the passing of time.

Autumn Kuklinski: "Hulk Smash! Regulating Anger Requires More Self-control Strength." Project Advisor: Mark Muraven. Department of Psychology.

Regulating emotion requires self-control resources, though regulating some emotions, such as anger, may deplete more. Self-control allows one to cease acting on undesired urges (Tangney, Baumeister & Boone, 2004). Suppression is a strategy influencing the feeling and expression of emotion by inhibiting expression of an individuals' present emotion (Gross, 2002). Emotions vary by degree on two dimensions: pleasure and arousal (Russell, 1980). Emotions chosen for this study represent combinations of extreme ends of

each dimension (e.g., pleasure/displeasure, high/low arousal), yielding excitement, relaxation, anger, or sadness. This study examines the effect of emotional arousal level on self-control. Experiencing a high arousal emotion (e.g., excitement, anger) should require more self-control to suppress than a low arousal state (e.g., relaxation, sadness). Based on previous research, participants should regulate to a neutral mood when expecting to interact with another individual (Erber, Theriault, Wegner, 1996). This suppression should lead to depletion of self-control strength, producing significantly worse performance on subsequent self-control tasks than regulation of low arousal emotions.

Kevin Smith: "Experiencing Kaqchikel Tikonela." Project Advisor: Walter Little. Department of Anthropology.

What it means to be Kaqchikel Mayan is gestalt. In central-highland Guatemala their household and community organization, work allocation, and work investment is informed by a long history of; political disorder, trade liberalization policies, and economic inequity and poverty. Their present is also influenced by civil turmoil in the form of a genocidal military campaign against them, and their current president Otto Per6z Molina with alleged connections to this violent military campaign. Kaqchikel Mayan tradition feeds into the operation of the Guatemalan agricultural sector where Mayans breathe new meaning into diverse and contradictory local-regional practices of Kaqchikel. Based on case studies in Santa Maria de Jesus, San Juan Comalapa, and Tecpan (in the summers of 2011, and 2012), the proliferation of Mayan men and women into new and non-traditional positions for economic betterment and future security, as well as the development of new investment strategies were observed.

LC 3C: Presentations

Max Lawatsch: "A Revolutionized Coterie: The Transformation of British Romantic Critical Practices and Contemporary Internet Fora." Project Advisor: Kir Kuiken.

Throughout the centuries and well into the annals of history, writers have used rhetoric, peer review and the sphere of public discourse as tools of critique and analysis in publishing works. By the period of the European Renaissance, writers, poets and translators were well accustomed to sending letters, transcripts and their latest works to colleagues in an attempt to better their own work, and the work of others. This practice of analysis then moved from peer-peer review, into a group setting or clique that heavily emerged in and through the Romantic poets of the 19th century. With the creation of close-knit intellectual discourse, the Coterie came to be intimate circles of scholars working, "internally and externally, as a group, working to reform culture and society" (Cox 5). With modern technological advances like the availability of computers and access to the internet, an international connection of unending threads, connecting people, ideas and conversations was brought into fruition and a wealthy web of knowledge, available. With such progressions, the era of Information is formed, "anonymity" is granted and a profound discourse begun. Through its vastness and ubiquity, the internet gives way to trolls and technological waste, albeit beneath the clutter of advertisements and spam lies depth inherent and coveted in the circles of poets like Leigh Hunt, John Keats and Percy B. Shelley. A movement of cultural critical analysis, of a magnitude never before seen, admits to anyone an audience ad infinitum. I argue the contemporary discourse present today in influential landmark websites like Reddit.com, took precedence in the practice of the Coterie significant in 19th Century London and permits the circle's effectiveness on a global scale.

Austin Gunner Litwhiler: "From Pulp to Webpage: Homestuck and Postmodern Digital Narrative." Project Advisor: Patricia Chu. Department of English.

Homestuck by Andrew Hussie is a work currently being developed as an experiment in internet storytelling. As a narrative born, crafted, and displayed digitally, it uses the internet as a means of production and presentation. Interactive and multimedia elements are brought into the narrative, forming a unique digital work that can only truly be experienced online. In order to analyze this new form of story, I must analyze the two genres it best fuses; graphic novels and video games. I'll be examining Homestuck as a primary text, analyzing its web page structure, the postmodern fusion of multimedia to tell a single story, and the theoretical nature of the narrative itself. Ultimately, in analyzing Homestuck hope to reveal the potential to be found in digital narratives while also examining the positive implications concerning our cultural leanings towards "screen media" and our increasingly connected digital body.

Ariana Wedin: "How and for what reasons did American medical doctors react to the Vietnam War and how did they relate their reasons to their profession?" Project Advisor: Carl Bon Tempo. Department of History.

My research shows how civilian American medical doctors responded to American involvement in the Vietnam War. It focuses on the war related feelings and actions of Dr. Benjamin Spock, Dr. Thomas A. Dooley, the American Medical Association

(AMA), and medical school students from 1956 to 1975. The reasons for these reactions and their relation to the medical profession are explained. Relatedly, the thesis explores whether doctors had shared motivation for their actions and whether their actions were directed toward swaying public opinion of the war or toward directly affecting the American war effort.

My research on Dr. Spock is from biographies, newspapers and his books *Spock on Spock* and *Dr. Spock on Vietnam*. I relied on Dr. Dooley's books *Deliver Us From Evil*, *The Edge of Tomorrow* and *The Night They Burned The Mountain*, and biographies, newspapers, and his personal archives. My research on the AMA includes newspapers, the 1956 to 1975 editions of the *Journal of the American Medical Association*, and two pre-Vietnam era AMA histories. My sources on medical students are newspapers and student publications. I used various historical accounts of the anti-war movement for context.

Dr. Spock opposed the war. He felt he had humanitarian duties as a doctor to speak out against unnecessary attacks on human lives and his political beliefs were that the American government mishandled the war. He hoped to influence others, and make political leaders end the war. In contrast, Dr. Dooley supported the war because as a doctor he felt the Vietnamese people needed the advanced medical help of Americans, and as a devout Catholic he felt Communism had to be defeated. Thus, he founded MEDICO and coordinated direct aid to South Vietnam. He also tried to rally American public opinion in support of the war through his writings.

The AMA's development of support for the War began in 1958 with concerns about Cold War, emphasizing "freedoms" and "Americanism", through to 1965. From then until 1975 the AMA was directly involved in the war effort by recruiting for MEDICO and the Peace Corp. Its own efforts were building hospitals with the U.S. State Department, and a medical school in South Vietnam. The AMA cited responsibility as medical professionals to aid global medicine with America's superior medical technology and knowledge.

Medical school students largely opposed U.S. involvement and organized protests from 1965 to 1968, then held forums and made appeals to politicians in 1969 and 1970. Their efforts were based on the belief that the war diverted attention from U.S. health issues and that American involvement caused human suffering and medical problems in Vietnam.

All doctors related their convictions, though differing, to their profession, citing "responsibility" as medical professionals and emphasizing medical efforts, either in South Vietnam or America. Doctors had other reasons for their convictions and acted in different ways. Some, such as Dr. Spock, and medical school students tried to sway public opinion, while the AMA tried to directly affect the war effort, and Dr. Dooley attempted to do both.

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