8TH ANNUAL
ELMHURST COLLEGE

Research and Performance Showcase

May 6, 2010

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*Sabbatical spring 2010

Elmhurst College

May 6, 2010

It gives me great pleasure to introduce the eighth Elmhurst College celebration of students' scholarly activity and creative work. The papers, presentations, and performances represented in these *Proceedings* demonstrate both the intellectual abilities of our students and the deep commitment of our faculty to encouraging and sustaining student research and performance.

As this volume shows clearly, we are not content to be a college where faculty present ideas and students passively receive them. Instead, we are a college committed to teaching students to undertake independent discovery and critical reflection. Most importantly, I think, these papers, presentations, and performances demonstrate that academic excellence is achieved when students are taught to take responsibility for their own learning, provided with the knowledge and tools to implement their learning, and then given an opportunity to demonstrate what they have learned. I am sure that these students will take their skills of discovery and critical reflection away from Elmhurst College and into the world, to make it a better place.

I am very impressed with the excellence shown here. I am very proud of the students and faculty who have collaborated to make this excellence possible. And I am very pleased that Elmhurst College can display this excellence to our community.

Alzada J. Tipton

Alzada J. Tipton
Vice President for Academic Affairs and Dean of the Faculty

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Research and Performance Showcase

ORDER OF EVENTS

REGISTRATION ..... 2:30 – 4:00
Founders Lounge, Frick Center

OPENING CEREMONY ..... 3:15 – 3:50
Irion Hall, Buik Recital Hall

ORAL PRESENTATIONS

- Circle Hall ..... 4:00 – 6:00
- Daniels Hall ..... 4:00 – 6:00
- Faganel Hall ..... 4:00 – 4:30
- Frick Center, Bryan Room 6:15

POSTER SESSION ..... 6:00 – 7:00
Founders Lounge, Frick Center

ART EXHIBITION ..... 6:00 – 7:00
Barbara A. Kieft Accelerator Art Space

RECEPTION ..... 6:00 – 7:00
Founders Lounge, Frick Center

PROGRAM

OPENING CEREMONY
Buik Recital Hall, Irion Hall
3:15 – 3:50

WELCOMING REMARKS
Dr. S. Alan Ray
President

MODERATED BY
Jon-Michael Manocchio

Kaia Pirazzini
The Physical Response of a Gaming Session with the Nintendo® Wii© Interactive Video Game
Faculty Sponsor: Dr. Raymond Kraus

Persons engaged in a regimen of regular physical activity have been shown to obtain numerous health benefits. The Nintendo® Wii Fit© video game is the first interactive video game explicitly marked as a fitness tool, yet currently there has been no assessment of the level of exercise intensity attained while playing. The purpose of this study was to assess the average exercise intensity achieved throughout a 30-minute Wii Fit© gaming session, and to compare these results to ACSM recommendations.

Julie Fischer, Alto Saxophone
Prelude, "Cadence et Finale"
Composer: Alfred Desenclos
Accompanied by: Professor Daniel Hennel

ORAL PRESENTATIONS

SESSION I: Circle Hall 014

— MUSIC —

4:00 "The Lullaby" from The Consul by Gian Carlo Menotti
- **Diane Morrison**

4:10 "Pavane for a Dead Princess"
- **Rebecca Tannahill and Jessica Petrik**

4:20 It's not noise, it's a tone cluster: A complete analysis of Avant Garde composer Henry Cowell
- **Rachel Bomba and Madison Cottingham**

4:30 "Eleanor Rigby's" Autopsy
- **Christopher Harmison and Mark Rutkowski**

4:40 "Phantom of the Opera*."* The Music behind the Musical
- **Megan Leonardo and Zachary Johnson**

4:50 Chick Corea's "Matrix"
- **James Peery and Scott Curry**

5:00 Different Approaches and Techniques in Composing Music for Film: A Personal Experiment
- **Jacob Whitecar**

5:10 Clash of the Tritones: Danny Elfman and the Modern Film Score
- **Marilyn Salazar and Nicole Denofrio**

5:20 "Ludus Tonalis" by Paul Hindemith
- **Francisco Silva and William B. Brown**

5:30 Analysis of Krzysztof Penderecki "Threnody to the Victims of Hiroshima"
- **Sean E. Armbruster and Jon Rosenthal**

5:40 An Essential Piece: Comprehensive Analysis of Aaron Copland's Symphony No. 3
- **Sarah Carlson and Mackenzie Parry**

5:50 Interpretations of "Slava!" (A Political Overture)
- **T. Duncan Parker and Sarah Schultz**

SESSION II: Circle Hall 011

— INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY —

4:00 Masters of Industrial and Organizational Psychology: Internship Experience
- **Katherine Dunn**

4:15 Criterion Validation Studies of Police Officer & Firefighter Written Exams
- **Amanda Yarbrough**

4:30 Personnel Recruiters and Variable Compensation Structures: Investigating Important Personal Characteristics
- **Jared Corrigan**

4:45 Internship with Heaven on Seven, Naperville
- **Kimberly Harner**

5:00 Practitioner Application of Competency Modeling
- **Kelly Bobik**

5:15 Internship at Mutual of America
- **Dordaneh Rachel Baghelail**

SESSION III: Circle Hall 131

— HISTORY —

4:00 Veterans of the Abraham Lincoln Brigade: Examining a Lifetime of Activism
- **Colleen Bannon**

— ENGLISH —

4:15 Existentialism in Dostoyevsky, Sartre, and Camus
- **Kevin Lepore**

4:30 Trained from the Cradle: Ineffective Parenting in Hard Times and Pride and Prejudice
- **Nina Giannangeli**

— RELIGIOUS STUDIES —

4:40 The Laments and Transformations of Spain's Pablo Picasso
- **Angela DeChant**

4:50 What Would Niebuhr Do? An Application of Christian Ethics to College Student's Cultural Apathy
- **Jennifer Kosciw**

5:05 An interdisciplinary understanding of a "Shift of Consciousness"; precluding to "inclusive unity" a pathway to peace
- **Gina M. Affatato**

— COMMUNICATION ARTS and SCIENCES —

5:20 The Dinner Table: Nourishing Mind, Body & Soul
- **Andrea E. Cladis**

— INTERCULTURAL STUDIES —

5:35 Reconstructing a Student Organization: Establishing a True Coalition for Multicultural Empowerment
- **Jennifer Kosciw**

SESSION IV: Circle Hall 133

— WORLD LANGUAGES, LITERATURES and CULTURES —

4:00 La Melodia de la Calle: Latin American "Gangs" in Spain
- **Jennifer Kosciw**

4:15 On Its Own: An Examination of 'Queer' Identity in Latin American Literature
- **Kyle A. Tade**

4:25 The Spanish Civil War and the Law of Historical Memory *(Panel Presentation)*

Lament for a Brigadist: Homage and Remembrance to the Volunteers of the Spanish Civil War
- **Colleen Bannon**

Remembering Miguel Hernandez in his Centenary: Poetic Expression and the Spanish Civil War
- **Catherine Callahan**

The Law of Historical Memory in Contemporary Literature and Film
- **Kathryn Smith**

SESSION V: Daniels Hall 212

— COMPUTER SCIENCE —

4:00 Unique Camera Movement and Orientation in a 3D Game
- **Jonathan Dominguez and Alexander Hawley**

4:15 Computer Game & Entertainment Project Development Capstone
- **Matt Herrera and Mark Lasky**

— CENTER FOR THE HEALTH PROFESSIONS —

4:30 Neuroprotection by Sex Hormones in Grey Matter of a MS Animal Model
- **Kenneth Kellner, Angela Gröbe*, Tim Clarner*, Jun Dang*, Cordian Beyer*, and Markus Kipp***

*Co-collaborators from RWTH Aachen University, Aachen, Germany

— PHILOSOPHY —

4:40 Who Owns This Brothel? Influences on Thai Sexual Culture and the Capability of Change
- **Emily Nagle**

— POLITICAL SCIENCE —

4:55 Machiavelli the Republican: How the Renaissance relates to the American Revolution
- **Krista J. Wiley**

5:10 The Cost and Benefits of the International Criminal Court and the Stance of the United States
- **Larissa Anderson**

5:20 Kyoto Protocol: Implementation Plans and Effectiveness
- **Kira Rold**

SESSION VI: Faganel Hall 112

— THEATRE/DANCE —

4:00 Dance: Expressing the Emotional through the Physical from the Choreographer's Perspective

- **Jamie Hasken, Nancy Heaney, Erik Hall, Emily Nadeau, Coley Nelson, Jessica Piper, Caitlin Potts, Kelsey Schubert, and Alivia Scimeca**

SESSION VII: Bryan Room (Frick Center)

— COMPUTER SCIENCE —

6:15 Enterprise Social Networking at Elmhurst College

- **Luis Almeida, Earl Arndt, Jason Bonnert, Mark Garcia, Tenicia Hicks, Edyta Jaworecki, Sam Joseph, Robert Mobley, Jorge Palma, and Sherry Sabatini**

POSTER SESSIONS

BIOLOGY

The Role of DNMT3B7 and ΔDNMT3B6 in Metastasis of Breast Cancer Cells

- **Meera Advani, Amy Du, Christopher L. Hulstein, Daniel J. Kelpsch and Lauren E. Williams**

CENTER FOR BUSINESS and ECONOMICS

Controlling Health Care Costs: Investigation into the Continuous Rise of Health Care Costs

- **Taylor Staten and David Martinez**

CHEMISTRY

Analysis of Polyphenols and Macronutrients in Teas

- **Tatjana Djakovic**

Organic Synthesis Using the Mizoroki-Heck Reaction

- **Michael Gannon**

Modifications of Gas Chromatographs with Flame Ionization Detectors (GC-FID) for Nonylphenol Analysis

- **Zach Hund**

Synthesis and Characterization of Tyrian Purple and 6-bromoidnigo

- **Cheryl Szkudlarek**

COMMUNICATIONS ARTS and SCIENCES

Dance Therapy and Children

- **Kathleen Bode**

EDUCATION

Race in College Writing and its Affect on the Researcher

- **Holly Jarecki**

Nonreligious Methods of Moral Education

- **Matthew Kovich**

ENGLISH

The Function of the Literary Canon in a Digital Society

- **Heather Michaels**

GEOGRAPHY and GEOSCIENCES

Red and Blue States: Determining State Voting Tendencies in Recent Presidential Elections and Comparing Them to Their Stereotypes

- **Andrew Dunham**

Thinking Regionally About Water: Problems and Opportunities within the Rock Creek Watershed

- **Heather Hall**

Development of Suburban Population as a Direct Result of Expanding Transportation Networks in the Chicago Collar Counties

- **Kelsey Caldwell**

Impact of Carbon Footprints across the Lower 48 States: Gender Discrepancies

- **Catherine Peters**

Potential Mega-tsunami Hazard Area for New York Coast

- **Brian Firek**

NURSING

Posttraumatic Stress Disorder in Children Following Pediatric Medical Traumatic Stress

- **Natasha Radnov**

Spirituality in Nursing

- **Anca Contra and Leslie Shearer**

Literature Review of the Effects of Exercise on Bone Mineral Density in Women Breast Cancer Survivors Who Have Received Chemotherapy

- **Kelly Gleason**

The Impact of Art Therapy on Cancer Patients

- **Heather Yap**

The Effects of Animal-Assisted Therapy on Patients with Dementia

- **Rosita Gomez**

PHYSICS

Video Analysis in the Undergraduate Physics Classroom

- **Matthew Allmandinger and John O'Malley**

Development of a Novel Imaging System to Study Odor-Following Behavior in *Drosophila* Larvae

- **Matthew Graff and Alexander Grabenhofer**

The Whisker Anemometer — Rat Whiskers as Sensitive Detectors of Air Currents

- **Michael Meaden and Mitra J.Z. Hartmann** (Professor at Northwestern University)

Studying Quasar Variability: The Lives of Black Holes in Distant Young Galaxies

- **Crystal L. Pope**

POLITICAL SCIENCE

An Application of Mary Daly's Feminist Critique of Religion to Present Day Christianity and Islam

- **Flavia Pocari**

Theory and Practice

- **Sylvia Cichosz**

PSYCHOLOGY

The Effects of Nonverbal Communication on Perception and Recall

- **Jennifer Van Ewyk and Christina Nelson**

Motivation and Purpose

- **Melissa Bunag, Christine Doellinger and Maggie McTeague**

The Link between College Students' Schedule and Their Ability to Multitask

- **Leslie Palmer, Brandi Ruiz, and Amanda Schellinger**

Effects of a Structured Environment on Students with Autism

- **Alexander Porter, Shruthi Bhandaru and Christina Neri**

The Effect of Working Memory Differences on Remember/Know Judgments for Falsely Recognized Words

- **Michael Bixter, Nesina Kritikos and Nicole Peterson**

Parent Reinforcement and Gender Stereotypes

- **Shauna Potrawski**

A Review of the Etiology and Treatment of Anorexia Nervosa and Bulimia Nervosa

- **Julianne Nelson**

Emotional Intelligence and the Preference of Leadership Style

- **Devika Krishnadas**

Emotional Memory: The Affect of Gender

- **Ashley Bergmann and Amanda Odegaard**

The Effects of Different Musical Conditions on Elliptical Exercise Rate

- **Pedro Mercado and Jacob Garbacz**

Complementary and Similar Personality Types in Relational Selection

- **Emily Flaherty, Andrea Spapperi, and Alyssa Scully**

Dream Interpretation and the Unconscious

- **Katherine Kasper**

The Effect of Noise Distractions on College Students' Academic Performance

- **Tiffany Ducato, Kendra Ostrander, and Monika Sienko**

Music, Color, and Mood Association

- **Michelle Swanson and Rashida Joiner**

Family Disruption Influences on Children's Self-Esteem, Self-Perception, and Grades

- **Anna Ziaja**

How Divorce Influences Attitudes about Significant Relationships in College Aged Students
- **Christy Fraticola and Brittnie Brocksome**

Gender Differences in Memory for Food Items and Perceptions of Body Image
- **Bonny A. Bright, Marisa Cifaldi, Jessica Najarian and Sarah Jerousek**

False Memory and Stress in College Students
- **Drew Farr, Alexander Porter, and Kimber Davison**

The Relationship between Visual Response Time and Stimuli
- **Leif Mueller, Sara Balocca, Natasha Radnov and Kimberly Skoczelas**

How Music Affects False Memory in College Students while Studying
- **Rosaria Gallina, Rosa Cabrera, Kari Pandyra, Nour Olwan**

The Impact of Short Term Memory on Susceptibility to False Memories
- **Donna Porter, Alicia Carter, Lauren Prena, and Gina Affatato**

The Effects of Associative Word Primes on the Perception of Ambiguous Figures
- **Michael Besch**

Online Social Networking Sites and Their Relationship with Social Anxiety and Personality
- **Stacey Constantine, Ellen Hunka, Juliana Lara, and Deandra Cannizzaro**

Accuracy and Confidence in Eyewitness Memory Recall for Male and Female Groups and Individuals
- **Jennifer Bensmiller, Giana Ferrari, Ashley Mika, Christina Riani, and Hannah Kubat**

THEATRE

Creating Soldiers: Dramaturgy for the Elmhurst College Production of *Tracers*
- **Jon-Michael Manocchio**

ARTIST EXHIBITIONS

ACCELERATOR ART SPACE

- **Brandi Caruso***
- **Maria Clarite Marotta***
- **Danny DeCleene***
- **Amanda S. Dziak***
- **Emily Becker Bruzzini***
- **Kimberly Katayama***
- **Jessica Wilson***

*See the artist's statements beginning on page 36 for more details.

ABSTRACTS

Oral Presentations

MUSIC — Circle Hall 014

DIANE MORRISON

"The Lullaby" from The Consul by Gian Carlo Menotti

Faculty sponsor: Dr. Kevin Olson (Music)

Gian Carlo Menotti's Pulitzer Prize-winning opera, The Consul, deals with the plight of refugees at the mercy of a heartless bureaucracy. "The Lullaby" is an aria from The Consul in which a grandmother sings a sick infant to sleep, providing an escape from the infant's suffering. The Consul was one of several popular operas written by Menotti in the 1940s and 1950. His intention was to bring opera closer to the Broadway theatergoer. In this presentation will explore Menotti's juxtaposition of contemporary and classical operatic style and examine textual, harmonic, and formal devices in a representative piece by one of the great opera composers of the 20th century.

REBECCA TANNAHILL and JESSICA PETRIK

"Pavane for a Dead Princess"

Faculty sponsor: Dr. Kevin Olson (Music)

Maurice Ravel was known for his impressionistic and neo-classic styles, which have served as inspiration to generations of subsequent composers. Ravel's "Pavane for a Dead Princess" was not written for a specific princess, but it was to reflect his interest in the Spanish royal courts of the Renaissance. This presentation will discuss the impressionistic techniques that Ravel utilizes; his interest in blending old and new through neo-classicism. The harmonic and structural qualities that are found in this work will also be analyzed.

RACHEL BOMBA and MADISON COTTINGHAM

It's Not Noise, It's a Tone Cluster: A Complete Analysis of Avant Garde composer Henry Cowell

Faculty Sponsor: Dr. Kevin Olson (Music)

This presentation will be a historical and comprehensive analysis of technical innovations in a sampling of piano pieces written by Henry Crowell. Details on the composition's life will be included as well as in-depth discussion on the unconventional musical techniques that appear in a variety of his works. Selections will include: "The Banshee" (1925), "The Aeolian Harp" (1923), "Tiger" (1933), and the "Tides of Manaunaun" (1912). This will be followed by a discussion of his pieces and the different harmonic, formal, and motivic choices used in the composition. Both a musical and print copy of the score will be included in a PowerPoint presentation.

CHRISTOPHER HARMISON and MARK RUTKOWSKI

"Eleanor Rigby's" Autopsy

Faculty sponsor: Dr. Kevin Olson (Music)

John Lennon's and Paul McCartney's 1966 track, "Eleanor Rigby," is explored as arguably being the first mainstream baroque pop track. While originally written as a song for piano, the producer, George Martin, transformed it into a piece that featured vocalist singing over a string quartet. "Eleanor Rigby" seems to be an exercise in simplicity that features the chords C and Em. Interestingly enough, the piece is played in E minor, which makes many of the progressions VI to I. In the chorus, the strings play an Em7 chord, then drop down to an Em6, and then finish off the next two bars with a C to a regular Em. There is a lot of movement up and down the scale, as well as and many instances of playing selections of the scale, such as the third up to the fifth and back down. The recording of the piece itself is also historically

significant due to the methods used to produce the song. Eight musicians were playing, meaning all parts were doubled up, and bits of different takes were pieced together to make the master version.

MEGAN LEONARDO and ZACHARY JOHNSON

"Phantom of the Opera." The Music behind the Musical

Faculty sponsor: Dr. Kevin Olson (Music)

"The Phantom of the Opera" is the most popular and most-seen musical of its time. Since its opening in 1986, this musical has grossed over $5 billion dollars worldwide. The music, created by well-known writer Andrew Lloyd Weber, varies immensely in style. The main theme of the play, so notably named after the musical itself, was that of something ahead of its time; blending both opera and rock & roll. For this presentation we will be looking into both the historical and analytical aspects of this popular piece. In the analysis, we will talk about the changes in tonality, the techniques used, the era of the piece, and the interesting parts of the piece that create the feeling and display subject while evolving the characters. In the history, we will cover the inspiration, the background of the author(s), and the impact it has made up to this point.

JAMES PEERY and SCOTT CURRY

Chick Corea's "Matrix"

Faculty sponsor: Dr. Kevin Olson (Music)

The piece to be presented is entitled "Matrix" by pianist/composer/arranger Chick Corea. The piece was originally composed for Corea's jazz trio album "Now He Sings, Now He Sobs," released March 14, 1968 by Solid State. The entire song is essentially a piano solo with riveting, intricate runs up and down the piano at a racing pace. We shall analyze the piece's obscure meter and form, along with a few of Corea's elaborate solo segments. The 2004 Grammy award winning song is a masterpiece of complex time signatures and syncopation. Matrix captures the listener's attention and holds on to it throughout its 10 minute 47 second duration.

JACOB WHITECAR

Different Approaches and Techniques in Composing Music for Film: A Personal Experiment

Faculty sponsor: Dr. Kevin Olson (Music)

This presentation will examine the trials and successes encountered while scoring a stop-motion animated film entitled "Animate Objects." Having no prior experience with film scoring, I was forced to create my own method utilizing the technology available to me, complete with all of its limitations. Through this learning process I discovered many of the difficulties inherent in film scoring as well as the some of the techniques composers use in confronting these difficulties. Excerpts from the score, as well as the film itself will accompany the presentation.

MARILYN SALAZAR and NICOLE DENOFRIO

Clash of the Tritones: Danny Elfman and the Modern Film Score

Faculty sponsor: Dr. Kevin Olson (Music)

Danny Elfman composer, studio musician and vocalist, is arguably the Renaissance man of the contemporary film score. Champion of the tritone, a musical interval once officially denounced by the Roman Catholic Church as the "Devil's Interval" and therefore, taboo in early Western music, Elfman has brought this interval out of the darkness and gloom and into our living rooms and movie theatres. He is known for breathing life into many of his dark and haunting themes that often become characters in their own right. From scores such as "The Simpsons," "Batman" and "Edward Scissorhands," we will present a brief history of this interval and how Elfman, using meticulous orchestration, has made the tritone commonplace in modern film score vernacular.

FRANCISCO SILVA and WILLIAM B. BROWN

"Ludus Tonalis" by Paul Hindemith

Faculty sponsor: Dr. Kevin Olson (Music)

Paul Hindemith is recognized as one of the most recognized composers between the First and the Second World Wars. His compositional innovations detailed in his "Craft of Musical Composition" resulted in groundbreaking works such as "Ludus Tonalis." "Ludus Tonalis", which means 'play of tones,' is a piano work by Hindemith that incorporates contemporary techniques such as atonality and combines them with Baroque styles such as fugal counterpoint and retrograde inversion. This presentation will uncover relevant historical information about the composer and will focus primarily in the analysis of "Ludus Tonalis" as Hindemith's representation of his equally tempered atonal theory. We will also discuss the analysis of the twelve fugues found in the piece and how Hindemith connects this piece around his revolutionary process of key relationships.

SEAN W. ARMBRUSTER and JON ROSENTHAL

Analysis of Krzysztof Penderecki's "Threnody to the Victims of Hiroshima"

Faculty sponsor: Dr. Kevin Olson (Music)

The presentation analyzes historically and musically Krzysztof Penderecki's "Threnody to the Victims of Hiroshima". The piece, composed in 1960, utilizes many unique techniques for an orchestral work. Composed not on staff lines, but with cells, Penderecki calls for string sections of the orchestra to perform by knocking on the bodies of their instruments with their fists, and bowing on the opposite side of the bridge, to name a few unorthodox techniques. We propose to present this piece by playing segments of this eight-plus minute work to showcase Penderecki's non-traditional compositional techniques and to teach what messages the dissonant work is meant to convey. Through the use of visual diagrams, the difference between cell notation and standard musical score, the distinctive playing techniques required of the orchestra, and the hyper-tonality not often used in Western music will be explained and demonstrated.

SARAH CARLSON and MACKENZIE PARRY

An Essential Piece: Comprehensive Analysis of Aaron Copland's Symphony No. 3

Faculty Sponsor: Dr. Kevin Olson (Music)

What happened when the symphony, a European-dominated musical form, became Americanized at the end of World War II? The answer lies in Aaron Copland's groundbreaking Symphony No. 3, the final piece he composed. It is known as the essential American symphony and fuses "Americana" ballets with the traditional symphony form. This presentation focuses on the fourth movement of Symphony No. 3, *Molto deliberato*, which serves as a majestic finale, tying together the symphony's opening motif with the main motif from "Fanfare for the Common Man," an earlier work by Copland. The movement will be analyzed comprehensively, focusing on the formal, harmonic, and motivic structure and how these aspects play an essential part to the symphony as a whole, while reflecting on the country's struggles at the time.

T. DUNCAN PARKER and SARAH SCHULTZ

Interpretations of "Slava!" (A Political Overture)

Faculty sponsor: Dr. Kevin Olson (Music)

World-renowned composer and conductor, Leonard Bernstein, educated the masses with his intriguing music lectures and also influenced countless listeners with his work as music director of the New York Philharmonic. A cardinal moment in Bernstein's long career and true display of his artistic skill was his presentation of the vaudevillian piece "Slava!" premiered at the National Symphony Orchestra in 1977. Bernstein used this piece to pay homage to his fellow conductor, Mstislav Rostropovich, who was to be honored that night. "Slava!," meaning glory in Russian, works to encapsulate a bit of history by referencing the coronation scene of Modest Mussorgsky's opera Boris Godunov. This presentation will

examine the eccentric "razzmatazz" melodic motives, fast-paced rhythmic modulations, references to Russia's political upheaval at the time of Tsar Godunov and, overall, an energizing piece that holds audiences at the edge of their seats.

INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY — Circle Hall 011

KATHERINE DUNN

Masters of Industrial and Organizational Psychology: Internship Experience

Faculty Sponsor: Dr. Jane Jegerski (Psychology)

Between April 2009 and March 2010, I completed an internship under the direction of Dr. Thomas Sawyer. Elmhurst College Partners, in conjunction with Elmhurst Memorial Healthcare worked on creating a leadership development model for healthcare organizations. My internship consisted of assisting in the development and pilot testing of a survey for healthcare Chief Executive Officers; I also wrote a proposal for the next phase of the project. The presentation will display what I learned through discovering the importance of integrating scientist and practitioner roles in the field of Industrial and Organizational Psychology in order to participate in the field of psychology.

AMANDA YARBROUGH

Criterion Validation Studies of Police Officer & Firefighter Written Exams

Faculty Sponsor: Dr. Jane Jegerski (Psychology)

This internship consisted of two criterion validation studies of entry-level, off-the-shelf written exams for police officers and firefighters (PTS exam). The OTS exam score served as the predictor in the study. Police and firefighter academy scores and on-the-job performance rating collected from U.S. police and fire departments served as criteria. Descriptive statistics, frequencies, and correlations were run between an individual's OTS exam scores (predictor), police/firefighter academy scores, and on-the-job performance ratings (criteria). Correlations found in the police officer OTS exam study were not significant. Correlations found in the firefighter OTS exam study after running a validity generalization computer program were significant. The firefighter OTS exam was concluded to be a valid predictor of academy and on-the-job performances, while the police OTS exam was not a valid predictor.

JARED CORRIGAN

Personnel Recruiters and Variable Compensation Structures: Investigating Important Personal Characteristics

Faculty Sponsor: Dr. Jane Jegerski (Psychology)

Retaining employees through the use of a compensation structure consisting of high levels of variable pay can be quite challenging. The purpose of this research was to investigate the relationship between personal characteristics and turnover for full commission personnel recruiters (e.g. commission recruiters). The author first conducted a thorough job analysis of the position of personnel recruiter at an external recruiting firm. Based on the job analysis, the author developed custom measures of relevant personality dimensions and work values/motives hypothesize to be related to turnover. These measures were integrated into the recruiter questionnaire, which was distributed to 167 personnel recruiters across the United States. Results reveled that commission recruiters who are less risk-adverse are less likely to turnover. Findings of this study also indicate that commission recruiters more likely to engage in self-directed learning projects are less likely to turnover. Overall, the study found that a significant amount of the variance in the turnover intentions of commission recruiters can be explained by their risk-taking tendency and their likelihood top initiate projects geared toward learning.

KIMBERLY HARNER

Internship with Heaven on Seven, Naperville

Faculty Sponsor: Dr. Jane Jegerski (Psychology)

My presentation will review my experience as an intern at Heaven on Seven, Naperville. I will give an overview of the internship along with how my experiences relate to the professional literature of Industrial Organizational Psychology. An in-depth explanation will be given regarding conducting a sever job analysis, developing a server job description, conducting a server needs assessment, and developing a server training program. I will review major components of the server training manual that I developed during my internship while describing how each section was developed based on training research. Ultimately it will be shown that the training program for servers now has an emphasis on consistency, coherency, accountability, and thoroughness.

KELLY BOBIK

Practitioner Application of Competency Modeling

Faculty Sponsor: Dr. Jane Jegerski (Psychology)

For Elmhurst College's Masters of Industrial Organizational Psychology degree, I completed an internship in Learning and Development at Panduit Corp. The internship consisted of seven key projects based on Panduit Corporation's global competency assessment and competency model. The projects focused on the development of a competency model, technical and functional competencies, needs assessment, development courses, a communication plan, interview questions, and Lominger certification training. My work connected multiple learning and development areas including talent development, succession planning, and project management. Based on research, I will discuss the value and use of competency modeling using the scientist-practitioner model. I will provide advice to future Industrial Organizational Masters students based on my experiences throughout the internship; the knowledge and skills gained; and the challenges that were overcome.

DORDANEH RACHEL BAGHELAI

Internship at Mutual of America

Faculty Sponsor: Dr. Jane Jegerski (Psychology)

For my internship with Mutual of America, a Fortune 1000 insurance company with thirty five field offices across the country, I completed two major projects. The first was a research and recommendations report on the multigenerational workforce and the second was a performance appraisal tool for non-managerial service staff positions based on a job analysis. Based on a search of the literature, I was able to provide an overview of the generations currently in the workforce (Ex. Traditionalists, Baby Boomers, Generation X, and Nexters) and specific characteristics of each that affect job performance, job satisfaction, and retention. Based on this information, I was able to recommend specific strategies to the organization that would assist management and human resources in creating a more cohesive and effective workforce. For my second project, I conducted a formal job analysis of the non-managerial service staff using a variety of data collection methods. Based on this analysis I created an updated job description and based the new performance appraisal tool on a combination of this and the company's current Field Office ranking system.

HISTORY — Circle Hall 131

COLLEEN BANNON

Veterans of the Abraham Lincoln Brigade: Examining a Lifetime of Activism

Faculty Sponsor: Dr. Robert Butler (History)

My senior thesis in history examines the social activism of the veterans of the Abraham Lincoln Brigade, a group of approximately 2,800 men who joined the Fifteenth International Brigade from December 1936 to

June 1938 to fight in the Spanish Civil War on the side of the Spanish Republic. Various members of the Lincoln Brigade fought in the Civil War because they were activists; for others their war experiences in Spain deepened their social convictions. They were activists for progressive issues throughout their lives from prior to the war in Spain up to present day.

ENGLISH — Circle Hall 131

KEVIN LEPORE

Existentialism in Dostoyevsky, Sartre, and Camus

Faculty Sponsor: Dr. Ann Frank Wake (English)

The purpose of my research was to uncover and explore the concepts that underlie and define existentialist literature. This was done by exploring such concepts as "alienation", "bad faith" and "authenticity." I examined these concepts in written works by Fyodor Dostoyevsky, Jean-Paul Sartre and Albert Camus. A close examination of these works was used to illustrate the meaning and function of these above mentioned concepts. Textual evidence from Dostoyevsky's *Notes from Underground* showed that the existential state of alienation is the result of scientific and philosophical developments in the nineteenth century, which led to a growing consciousness of materialism and nihilism. In Dostoyevsky's master work, *The Brothers Karamazov*, the Russian author works out an existential-religious solution to these problems. In the twentieth century, Sartre and Camus work from the assumption that God has left the equation. Along with other twentieth century thinkers, especially Martin Heidegger, the French existentialists teach us how to avoid bad faith and alienation in the face of a godless and meaningless universe. The main thrust of the existentialist argument is that man has the ability to define his essence, and by doing so, may live authentically in the world with other people.

NINA GIANNANGELI

Trained from the Cradle: Ineffective Parenting in Hard Times and Pride and Prejudice

Faculty Sponsor: Dr. Ann Frank Wake (English)

This paper explores psychological parenting styles in Charles Dickens's *Hard Times* and Jane Austen's *Pride and Prejudice*. The psychological parenting styles are those which educational psychologists use to describe the environments parents create in their home or teachers create in their classrooms. The four styles include authoritarian, authoritative or democratic, laissez-faire, and neglectful parenting. The theory of parenting styles is based upon Gary M. Ingersoll's article "What is Your Management Style?" as well as Jeanne Ellis Ormrod's "Essentials of Educational Psychology." This paper claims that the father in *Hard Times*, Thomas Gradgrind, exhibits the characteristics of an authoritarian parent, while the father in *Pride and Prejudice*, Mr. Bennet, proves to be the laissez-faire parent. It is further argued that had both fathers adopted an authoritative or more democratic style, their children might have been more likely to avoid prejudices and achieve more successful ends. Through the sufferings of Louisa and Tom Gradgrind under the cement hand of their father, Elizabeth Bennet's careless education in prejudice and her sister, Lydia's underwhelming encouragement from her father, the need for a more authoritative parenting style in these families is explained through textual evidence. The paper concludes with recognition of the lessons these fathers learn and how their stories can be studied by modern-day parents in their own family constructions.

ANGELA DeCHANT

The Laments and Transformations of Spain's Pablo Picasso

Faculty Sponsor: Dr. Nancy Lee (Religious Studies)

The masterful artistry of one of the twentieth century's most avant-garde artists, Pablo Picasso, takes spectators on a visual journey of lament and transformation through a tour of personal tensions, social and political ideologies, and the tragedies of civil and world war. Picasso images are applicable to common laments throughout history and readily appeal to the shared humanity of the observer, but the historical eras of his work also illuminate the meaning, symbols, and metaphors that translate powerful messages and visual curiosities. These messages are both implicit and explicit, and not unlike the written elements of poetry, musical lament genres, and the messages of hope within the spiritual traditions. As Picasso explains, "move from the metaphor back to reality. I make you see reality because I use the metaphor." Here the canvas acts as the vehicle of expression of lament, both subtly and at times blatantly, pleading for community affiliation and recognition of what grieves and inspires the artist. This is similar to the written and musical lament traditions that use, in part, simile, metaphor, and symbolism to translate poetic meanings beyond the limits of ordinary language. These are present in the works Pablo Picasso's Blue Period, more specifically, "The Old Jew" (1903), "Blue Nude" (1902), and The Art Institute of Chicago's "The Old Guitarist" (1903). These images not only are indicative of Picasso's personal conflicts, but also contain strong societal critiques as well, and associations with the lament themes and calls for justice. Laments are largely the domain of written and music traditions, but these elements elegantly entered into the artistic realm in Pablo Picasso's life and creations. His social commentary and critique on canvas remind us of the more relevant values immersed in modern culture. The transformative capacity of his work cannot be overstated, not only as a form of catharsis for the artist, but for those who resonate with these complex expressions of lament and transformation. His beautifully reverent respect for life and the common individual allure his audience while pointing out life's exquisite magnificence despite its inherent sorrows.

JENNIFER KOSCIW

What Would Niebuhr Do? An Application of Christian Ethics to College Student's Cultural Apathy

Faculty Sponsor: Dr. Paul Parker (Religious Studies)

Although often overshadowed by his brother Reinhold, H. Richard Niebuhr has been one of the most influential Christian theologians of the twentieth century. A former student and president of Elmhurst College, H. Richard Niebuhr later taught Christian ethics for many years and consequently published a number of works which address the subject. In essays and publications such as "Christ and Culture," "Radical Monotheism and Western Culture," and "The Responsible Self," Niebuhr began to unravel critical components of Christian ethics. Decades after his death, his ethics explained in these works still resonate with many, leaving us to question what Niebuhr would suggest we do as Christians to address an issue such as college students' cultural apathy.

GINA M. AFFATATO

An interdisciplinary understanding of a "Shift of Consciousness"; precluding to "inclusive unity" a pathway to peace

Faculty Sponsor: Dr. Nancy Lee (Religious Studies)

In my interdisciplinary research I have sought to understand what exactly a "shift of consciousness" is, what precludes it, what it entails, and the results that are a by-product of such an experience. In recent years a "shift of consciousness" has still been regarded as a mystical phenomenon by the majority of the scientific/physics community, for what cannot be seen must then be improbable; however, quantum mechanics/physics have sought to change the "face" of understanding a "shift in consciousness." I then determined in my interdisciplinary research how it has been explained scientifically by quantum

mechanics, regarded as a profound "divine" transformation in religion (i.e. Christ consciousness, atman, fitra state, etc.), and understood psychologically as self-actualization. My research also explores the concept of "inclusive unity," which starts on the personal level as "death" of the ego (most basic needs) and transcends to the global collective community as "unity (perceived/projected oneness)." This research is essential in today's modern world in which surmounting tragedies and conflict call us to a shift of consciousness, and to the unity of a new pathway paved in peace.

COMMUNICATION ARTS and SCIENCES — Circle Hall 131

ANDREA E. CLADIS

The Dinner Table: Nourishing Mind, Body & Soul

Faculty Sponsor: Ms. Karen Roloff (Communication Arts and Sciences)

Current scholarly research in Family Communications stresses that the family dinner table is one of the most important places for the development of healthy children. Eating dinner as a family on a regular basis enhances familial communication, and produces healthier children prone to eat well and refrain from substance abuse and a host of other potentially dangerous recreational activities. Unfortunately, in our fast-paced society, the ritual of family dinners is rapidly diminishing. I have discovered through research that there is no perfect or ideal family meal. The primary requirement for the family dinner is that all family members are present and participating in the simple act of breaking bread and conversing with one another.

INTERCULTURAL STUDIES — Circle Hall 131

JENNIFER KOSCIW

Reconstructing a Student Organization: Establishing a True Coalition for Multicultural Empowerment

Faculty Sponsor: Dr. Kathy Rust (Intercultural Studies)

At the beginning of the Spring Term of 2010, I noticed a lack of participation in Elmhurst College's Coalition for Multicultural Empowerment (CME), a student organization which has traditionally claimed to empower various cultural backgrounds present through our student body at EC. I soon learned that the organization had essentially dissolved. Combining my interests in higher education and student affairs, intercultural education, community building, and leadership development, I decided to recreate and reorganize CME. To accomplish this, I examined the organizations past strengths and weaknesses, conducted research about college student organizations, and held interviews and meetings with students who will be involved in the organization. My goal was to have CME functioning and prepared for action in the fall of 2010 by the end of this research and development process.

WORLD LANGUAGES, LITERATURES and CULTURES — Circle Hall 133

JENNIFER KOSCIW

La Melodia de la Calle: Latin American "Gangs" in Spain

Faculty sponsor: Dr. Christopher Travis (World Languages, Literatures and Cultures)

In the fall of 2009, I studied abroad in Salamanca, Spain with the intention of spending part of my time there volunteering with immigrants and conducting independent research about immigration in Spain. When half of the semester had gone by and my study abroad program's promised volunteer location was unable to provide me with service hours, my research idea had to change. After looking at Spanish newspapers, I narrowed my broad topic of "immigration in Spain" to a very specific one—the presence of Latin American "gangs" in Spain. During my semester abroad, I wrote two lengthy essays addressing the topic. One was a straightforward research paper, and the other was an original work which stemmed

from my final assignment for my Literature and Cinema in Contemporary Spain course. The two essays approached the topic in very different manners, but they each effectively addressed this relatively unknown segment of the Spanish population.

KYLE A. TADE

On Its Own: An Examination of 'Queer' Identity in Latin American Literature

Faculty sponsor: Dr. Christopher Travis (World Languages, Literatures and Cultures)

The North American and European model of queer identity has been portrayed as the masculine, educated, upper-class, white male. Latin American queer identity has defied this model and appropriated itself to issues of class and more traditional Latin American understandings of same-sex relations and relationships. Through examination of the queer identities portrayed in José Donoso's "El Lugar sin Limites," Pedro Lemebel's "La Esquina es mi Corazón," Manuel Puig's "El Beso de la Mujer Araña" and Fernando Vallejo's "La Virgin de Los Sicarios" one confronts this defiance and begins to understand that Latin American queer identity is in a category all its own.

COLLEEN BANNON, CATHERINE CALLAHAN, and KATHRYN SMITH

The Spanish Civil War and the Law of Historical Memory

Faculty sponsor: Dr. Beatriz Gomez-Acuña (World Languages, Literatures and Cultures)

The Law of Historical Memory is a Spanish law passed by Congress in October of 2007 under the Presidency of José Louis Rodriguez Zapatero. The law recognizes the victims on both sides of the Spanish Civil War (1936–39) and offers condemnation and rejection of laws passed and trials conducted by the fascist regime of Francisco Franco (1939–1975). The three presentations included in this panel analyze different aspects of this law and explore its connections to 20th and 21st century Spanish fiction. These presentations intend to emphasize the significance and the impact that this law has had on Spanish society through the study, analysis, and composition of several literary works.

COMPUTER SCIENCE — Daniels Hall 212

JONATHAN DOMINGUEZ and ALEXANDER HAWLEY

Implementing Unique Camera Movement and Orientation in a 3D Game

Faculty sponsor: Dr. John Jeffrey (Computer Science)

This presentation will cover the basics of programming and 3D concepts. It will cover basic 3D game design elements such as events, modeling, physics, movement, and collision detection. In addition a unique feature where the player is in control of their orientation and point of view will be showcased. Finally, the presentation will cover the details of the programming and mathematic techniques involved with camera movement and orientation based on user input.

MATT HERRERA and MARK LASKY

Computer Game & Entertainment Project Development Capstone

Faculty Sponsor: Dr. John Jeffrey (Computer Science)

In the fall of 2009, work began on developing a video game for the Windows PC platform. The goal was to create a game from the ground up using Microsoft's XNA Game Studio 3.1, as well as utilizing the Microsoft DirectX Application Programming Interface (API) to render real-time 3D graphics. In the spring 2010 semester, work continued on the game as part of the Project Development capstone course. The purpose of the capstone project is to integrate all of the work from previous courses in the Computer Game & Entertainment Technology major including game theory, story, game play types, design, three-dimensional graphics and object-oriented programming. There is also an emphasis on the game development process which includes brainstorming, and preliminary documentation before the actual coding, play testing and forming a balance among all aspects of the game. The game created is called

"Escape from A 3D World", where the player's objective is to navigate his or her way through a series of mazes in the quickest amount of time possible, while also avoiding enemies and other hazards.

CENTER FOR THE HEALTH PROFESSIONS – Daniels Hall 212

KENNETH KELLNER, ANGELA GRÖBE, TIM CLARNER, JUN DANG, CORDIAN BEYER, and MARKUS KIPP

Neuroprotection by Sex Hormones in Grey Matter of a MS Animal Model

Faculty sponsor: Dr. Frank Mittermeyer (Center for the Health Professions)

The focus of this study was the neuroprotective effects of estrogen (E) and progesterone (P) within the brain grey matter of cuprizone-treated mice as a MS animal model. Multiple sclerosis (MS) is a devastating disease that affects over two million people worldwide. It is characterized by damage within the central nervous system (CNS), particularly to myelin. Sex hormones estrogen (E) and progesterone (P) have been shown to have important anti-inflammatory properties in the CNS and play a significant role in neuroprotection. It has been found that both hormones have therapeutic effects on the symptoms of MS. MS was considered to affect mainly white matter of the brain, but recent studies have shown widespread damage in the grey matter of the brain as well. In this study, mice were fed cuprizone to induce demyelination. Hormone treated mice were injected with E and P along with the cuprizone treatment. IHC staining of mice brain slices was performed to stain for myelin, oligodendrocyte cell bodies, astrocytes, and microglia. This study demonstrates that E and P are neuroprotective within the grey matter, a different underlying mechanism in grey and white matter pathology and protective steroidal effects may exist.

PHILOSOPHY — Daniels Hall 212

EMILY NAGLE

Who Owns This Brothel? Influences on Thai Sexual Culture and the Capability of Change

Faculty Sponsor: Dr. Katrina Sifferd (Philosophy)

Martha Nussbaum indicates that much of the debate related to prostitution is due to the controversies between women's sexual autonomy versus the mental and physical harm that can occur. My project attempts to analyze the problems of prostitution in Thailand via analysis of the historical and current practices, as well as by understanding how legalization would affect South East Asian culture and the health and autonomy of women. In Thailand, the Western-influenced legal system is not always congruent with the country's social customs. This project examines the strength and efficiency of the Thai legal system and the social reception of laws regarding prostitution to understand whether its legalization would be beneficial to women and women's development in Thailand. Finally, the project will utilize Nussbuam's capabilities to examine the measures within prostitution policy that could be taken to promote gender equality in Thailand.

POLITICAL SCIENCE — Daniels Hall 212

KRISTA J. WILEY

Machiavelli the Republican: How the Renaissance relates to the American Revolution

Faculty Sponsor: Dr. Mary Walsh (Political Science)

This presentation explores Machiavelli's republican ideals through consideration of Renaissance humanism, his involvement in the governance of the republic of Florence, and his high regard for Cicero and other Roman republicans. Although Machiavelli might have believed that certain ideas he presented in *The Prince* were practical for monarchial rule, his true and distinctly republican philosophy is revealed in *The Discourses*. However, *The Prince* need not be entirely discounted as a volume of Machiavelli's

political work; instead it must be understood that it is a representation of his beliefs as they apply to a monarchy, which was not the mode of government that Machiavelli believed to be ideal. *The Prince* was Machiavelli's attempt to prove his worthiness to a monarch, when in reality he would have preferred not to live under the rule of a monarch at all. The themes of the superiority of republicanism and the inferiority of monarchy that appear in Machiavelli's work can be applied to the events American Revolution.

LARISSA ANDERSON

The Cost and Benefits of the International Criminal Court and the Stance of the United States

Faculty Sponsor: Dr. Jennifer Boyle (Political Science)

The International Criminal Court (ICC) is based on a treaty among a group of members of the United Nations. Created in 2002, the ICC is intended to prosecute war crimes, genocide, and other crimes against humanity within the jurisdiction of its membership. There are currently 11 states who have signed the statute from areas such as Africa, Asia, Europe, and Latin America. However, several powerful countries—including the United States, Russia, China, Iraq, and Israel—have declined the invitation to sign. There are benefits to the implementation of the ICC for the world community, and benefits for individual states belonging to the ICC. Yet there are costs to ICC membership as well. In my paper, I research these costs and benefits of ICC membership. Based on this analysis, I discuss why the United States is not a current member of the ICC, and project the likelihood of US involvement in the future.

KIRA ROLD

Kyoto Protocol: Implementation Plans and Effectiveness

Faculty Sponsor: Dr. Jennifer Boyle (Political Science)

My research was to discover how the signatory countries of the Kyoto Protocol implemented their emission reduction plans and to discern the success rate of each individual plan. I also sought to learn what methods of implementation were effective and which methods were ineffectual. When applying the Kyoto Protocol, state and non-state actors have used a wide range of implementation techniques, achieving varying degrees of success due to multifaceted factors that have either helped or hindered the rate of success. Some states have chosen a route of little government involvement, with vague policies and distant promises of future action as the backbone for their implementation, relying heavily on individual citizen participation. Other states choose a more heavy-handed approach, involving much action on the part of the government through clear, precise legislation and the formation of regulatory committees. There was a strong correlation between the amount of state involvement and commitment to an implementation plan and the success of the implementation plan. For Russia, Australia, and Japan, government distraction has thoroughly hindered their individual implementation of environmental policy in accordance with the Kyoto Protocol. Dissimilarly, the EU has demonstrated a strong government commitment to environmental policy and with the use of necessary techniques that have proven very successful in the implementation of the Kyoto Protocol.

THEATRE/DANCE — Faganel Hall 112

JAMIE HASKEN, NANCY HEANEY, ERIK HALL, EMILY NADEAU, COLEY NELSON, JESSICA PIPER, CAITLIN POTTS, KELSEY SCHUBERT, and ALIVIA SCIMECA

Dance: Expressing the Emotional through the Physical from the Choreographer's Perspective

Faculty Sponsor: Ms. Amy Lyn McDonald (Theatre)

This performance is a collaborative effort showcasing the choreographic talent of several exceptional Elmhurst College Dance minors and faculty. Ranging from solos to small group pieces, the selections in this event approach dance from a highly expressive perspective be they literal or abstract. Each of the individual choreographers voices his/her emotional context very differently, using his/her own unique movement vocabulary to express a mood, event, and/or character. The styles and dance genres

represented range from jazz and hip-hop to contemporary and modern dance. Audience members would be introduced to the choreographic process behind the work, made privy to the choreographers motivations or intentions, and encouraged to provide feedback and/or ask questions of the choreographers after viewing the dance pieces.

COMPUTER SCIENCE — Bryan Room, Frick Center

LUIS ALMEDIA, EARL ARNDT, JASON BONNERT, MARK GARCIA, TENICA HICKS, EDYTA JAWORECKI, SAM JOSEPH, ROBERT MOBLEY, JORGE PALMA, SHERRY SABATINI

Enterprise Social Networking at Elmhurst College

Faculty sponsor: Ms. Linda Krause (Computer Science)

This presentation includes an overview of the topics learned in the Master's of Computer Information Systems program that contributed to the design and development of a robust social platform for the Elmhurst College Community. The tool was developed to eradicate errors that occur with other business tools. Problems which occur include slowed collaboration, fragmented electronic communication, and dissonant products such as presentations, spreadsheets and documents, as well as an ineffective distribution of knowledge. The developed social platform works to open communication lines, synchronize, engage, and inform people and teams, and provide user ease.

Poster Sessions

BIOLOGY

MEERA ADVANI, AMY DU, CHRISTOPHER L. HULSTEIN, DANIEL J. KELPSCH, and LAUREN E. WILLIAMS

The Role of DNMT3B7 and ΔDNMT3B6 in Metastasis of Breast Cancer Cells

Faculty Sponsor: Dr. Stacey Raimondi (Biology)

This study focused on two breast cancer cell lines, MDA-MB-231 and MCF-7, which are highly invasive/metastatic and poorly invasive, respectively.DNA methyltransferases (DNMTs) are enzymes that regulate transcription by methylating DNA. The researchers hypothesized that expression of DNMT3B7 and ΔDNMT3B6 decreases E-cadherin expression thus promoting metastasis through the p120 signaling pathway.

CENTER FOR BUSINESS and ECONOMICS

TAYLOR STATEN and DAVID MARTINEZ

Controlling Health Care Costs: Investigation into the Continuous Rise of Health Care Costs

Faculty Sponsor: Dr. Gurram Gopal (Business Administration)

This project investigates the source and impact of rising costs within the health care industry. Methods included interviews with hospital employees, financial report analysis of pharmaceutical and health insurance firms, and examination of the health benefits of Google, Wal-Mart, Trader Joe's and Whole Foods. The results show that selling and administrative costs were substantially higher than research and development costs. Results also showed a disproportionate relationship of costs between the high tech and the pharmaceutical industries. Results also show that the health care industry spends more on overhead then in research and development. Although drug companies argue that they must recover research costs, the real cost that must be recovered is the selling and administrative costs of a company. If the drug companies can dramatically cut selling and administrative costs, lower drug prices could be achieved. It is proposed that the United States globalize the pharmaceutical market, put for regular health

screening initiatives as a part of a prevention plan, and patent length reductions on pharmaceutical products.

CHEMISTRY

TATJANA DJAKOVIC

Analysis of Polyphenols and Macronutrients in Teas

Faculty Sponsor: Dr. Kimberly Lawler-Sagarin (Chemistry)

The study of the antioxidative properties of teas is significant for reducing incidence of disease. Teas contain polyphenols, a group compounds known as antioxidants. Polyphenols neutralize the highly reactive free radicals that form in our body. Free radicals result from natural processes such as aerobic respiration and exogenous sources such as tobacco smoke, certain pollutants and pesticides. Free radicals are able to damage cellular macromolecules which may result in certain degenerative diseases such as Alzheimer's and cancer. While the body has several innate defense systems against free radicals, it is not sufficient to compensate for the amount of free radicals that are produced. Therefore, we take in additional antioxidants by consuming foods such as fruits, vegetables, and beverages such as herbal teas. In this study, the polypenolic content of four different types of herbal teas was analyzed. The teas included: Yellow Mountain Green tea from China, Indian Assam tea (Black), Chinese Pu-erh tea, and NOW Foods Roobios tea. In addition to the polyphenolic analysis of teas, a macronutrients analysis was also performed using atomic absorption spectroscopy to quantify the amounts of calcium, sodium and potassium elements in the teas.

MICHAEL GANNON

Organic Synthesis Using the Mizoroki-Heck Reaction

Faculty Sponsor: Dr. Eugene Losey (Chemistry)

The Mizoroki-Heck reaction, commonly referred to as the Heck reaction, allows for the addition of aryl compounds to vinylic compounds when reacted with a palladium catalyst. The Heck reaction simplifies previous synthesis methods that required the use of multiple reactions and chemicals. This is an extremely useful method in the medicinal world because it allows for a more efficient production pharmaceuticals. The Heck reaction is well-known for producing drugs that can help reduce blood pressure. The purpose of this project is to perform the Heck reaction using different types of aryl and vinylic compounds to find which reactants will give reliably high experimental yields. In previous experiments with this reaction, the product has been brown and not the typical white crystalline solid expected. A scavenger resin will be used to see if its use has any effects on the appearance of the final product. The procedure used for this experiment was taken from Martin (2000), and the products were analyzed by IR and NMR spectroscopy.

ZACK HUND

Modifications of Gas Chromatographs with Flame Ionization Detectors (GC-FID) for Nonylphenol Analysis

Faculty Sponsor: Dr. Michelle Applebee (Chemistry)

Gas chromatography is a widely used technique for separating compounds capable of vaporization. Flame ionization detectors are highly sensitive to hydrocarbons, which makes them ideal for the detection and analysis of most organic compounds. Two GC-FIDs were donated to the Chemistry Department at Elmhurst College to conduct research pertaining to the microbial degradation of nonylphenol. In the environment, nonylphenol can function as an estrogenic mimic and can disrupt natural hormones in aquatic ecosystems. Modifications to both of the instruments are necessary to run and analyze samples containing nonylphenol; this report further discusses these modifications.

CHERYL SZKUDLAREK

Synthesis and Characterization of Tyrian Purple and 6-bromoindigo

Faculty Sponsor: Kimberly Lawler-Sagarin and Dr. Eugene Losey (Chemistry)

Tyrian purple is a historic dye named after its point of origin, Tyre, and is obtained from marine mollusks. To produce 1.4g of dye, 12,000 mollusks are needed. As a result, only nobleman, kings, and high-ranked church officials could afford the dye. In historic samples of the dye, three components were found: 6,6-dibromoindigo the main component of tyrian purple, 6-bromoindigo, and indigo. In our experiment, tyrian purple was synthesized using a procedure developed by Imming, Zentgraf, and Imhof. Also in our experiment 6-bromoindigo was synthesized using a method developed by Clark and Cooksey. Each procedure was a three step synthesis. The resulting products were characterized by infrared spectroscopy, nuclear magnetic resonance imaging, and ultraviolet/visible spectroscopy.

COMMUNICATION ARTS and SCIENCES

KATHLEEN BODE

Dance Therapy and Children

Faculty Sponsor: Ms. Amy Lyn McDonald (Communications Arts & Sciences)

Dance therapy, the American Dance Therapy Association, and ways in which this form of therapy can be used by various communities of people are explored. The purpose of this exploration was to determine how dance therapy affects children, especially those with learning disabilities or other physical, emotional, or psychological challenges. A review of different ways that dance therapy can help with their use of non-verbal communication and expression of feelings was conducted. More specifically, the research focuses on children with ADHD, autism, and depression. It was found that self-confidence and social interactions increased with the use of dance therapy. This evidence was noted multiple times throughout this particular case study.

EDUCATION

HOLLY JARECKI

Race in College Writing and its Affect on the Researcher

Faculty Sponsor: Dr. Ayanna Brown (Education)

The purpose of this qualitative study was to investigate how white pre-service college students engaged in discussions of race through journal writing. The sample consisted of five females and five males, ages 18–25. Data was collected from journals written in an education course, where students were encouraged to reflect and react to the information they read, experienced, viewed, or heard in the course. The topics for the journal were based purely on student interest and their guidelines for writing were based on guided questions offered as suggestions by the professor.

MATTHEW KOVICH

Nonreligious Methods of Moral Education

Faculty Sponsor: Dr. Debra Meyer (Education)

In the field of psychology, morality is defined as the general standards one has with regards to right and wrong behavior. In the present paper, moral development will be defined as one's growth and change in one's general standards as regards right and wrong behavior. In or out of educational settings, moral development is of primary importance. People with healthy moral development lead to a better society because such people exhibit more frequent pro-social behaviors (helpful behaviors to others), and will perform less frequent moral transgressions (harmful acts, or acts which infringe on others' rights).

Traditional religious beliefs serve, for many, as the educational framework for morality. However, through close reading of studies, such a framework is found lacking. Furthermore, in modern educational settings, students of every religious affiliation, or none, are represented. In order to give a fair, equal, and beneficial moral education to all of these students while protecting the first amendment rights of all involved, the following question must be addressed: What nonreligious practices foster positive and active moral development?

Williams, Yanchar, Jensen, and Lewis suggest that a comprehensive, cross-curricular, integrated and discussion-based method of core-subject education in high schools provides a natural environment for moral development—if the teachers are creative and dedicated to character development. Leming feels that a story-telling model is optimal for the elementary grades (and presents his research into a specific such method). Covell and Howe advocate integrating an activity-based human rights curriculum into social studies and health classes at the middle-school level, focusing on children's rights. Sriraman and Adrian advocate discussion-based literature analysis as a mode for teaching "gifted" children.

The present paper deals with moral education in K–12 schools. Furthermore, the present author identifies a common weakness in many school-based moral education programs: those programs which are intensive and inventive enough to enact positive moral development tend to only focus on one age level of student. The present author suggests that integrating varied nonreligious approaches throughout the K–12 curriculum will be an effective method of moral education.

ENGLISH

HEATHER MICHAELS

The Function of the Literary Canon in a Digital Society

Faculty Sponsor: Dr. Ann Frank Wake (English)

I began this research project intending to learn about the formation of the American literary canon. However, my research led me to believe it is impossible to create a definitive canon that would please all critics and readers. It also motivated me question the importance of the canon wars in our current American society. The warfare over the canon is strongly debated among a small group of individuals who create the canon mainly for college students. However, to college education and post-college professions in our digital society, the importance of literature has diminished. In my presentation, I will discuss the ramifications of this shift, as well as outline possible ways to spark an interest in literature among students in a world where literature holds less and less societal importance.

GEOGRAPHY and GEOSCIENCES

ANDREW DUNHAM

Red and Blue States: Determining State Voting Tendencies in Recent Presidential Elections and Comparing Them to Their Stereotypes

Faculty Sponsor: Dr. R. B. Schultz (Geography and Geosciences)

The purpose of this project was to record state election data from recent elections (since 1980) in order to determine a tendency for each state to lean toward either Democratic or Republican sympathies. In order to do this, data was collected for the total voting population and their party preferences in each of the eight elections within this study. Observations were made evident such that each state's victorious party and margin of victory were recorded. Utilizing these two statistics, two different measurements of partisan tendency were made: 1) the percentage of elections of which the majority votes went to each party and 2) the average margin of victory. From these observations, further studies of electoral patterns were made. In the analysis, states were divided into five regions and compared to the percentage of urban population in the state to statistically determine if it is true that certain regions are more inclined toward one party (the strongly Republican southeast for example) and if urban populations tend to be

more Democratic. Results indicate that while there are exceptions, states with higher urban population are more likely to vote for the Democratic Party and strong tendencies associated with the regions.

HEATHER HALL

Thinking Regionally About Water: Problems and Opportunities within the Rock Creek Watershed

Faculty Sponsor: Dr. R. B. Schultz (Geography and Geosciences)

Watersheds contain water resources that are vital to sustaining communities. Therefore, local governments and regional planners should be aware of the risks and potential opportunities associated with the water resources in that area. In an effort to encourage regional thinking about watersheds, GIS is used as a tool to assess various water resources within the Rock Creek watershed and expose the potential risks and opportunities those resources afford. The risk of flooding is presented by displaying areas containing building permits and streets located within or near a floodplain. Two water-related opportunities within the Rock Creek watershed are presented. First, an environmental education program is proposed in which students bike from local elementary schools to nearby wetlands (via existing bike routes) to learn the relationship between environmental sustainability and alternate forms of transportation. Second, an analysis of current vegetation and land use surrounding the Rock Creek streams and rivers proposes target areas for re-vegetation efforts to reduce erosion and run-off.

KELSEY CALDWELL

Development of Suburban Population as a Direct Result of Expanding Transportation Networks in the Chicago Collar Counties

Faculty Sponsor: Dr. R. B. Schultz (Geography and Geosciences)

The expansion of suburbs has been precipitated by many events and decisions not excluding the expansion of transportation networks and the development of infrastructure, especially in large urban areas. Population trends and patterns are, in turn, affected by the development of urban and suburban infrastructure modifications. Using spatial data, including highways and railroads networks as a centerpiece, the observation of population clusters and patterns were detailed to decipher patterns of development. From those observations, it is evident that the most populous cities are located near major highways and/or railroad networks. Additionally, only three of the 142 major cities in the six collar counties around Chicago are more than two miles away from a major highway. Those cities included Naperville (DuPage Co), Evanston (Cook Co) and Lake in the Hills (McHenry Co). Because the location of major cities in the six collar counties around Chicago is in close proximity to rails and highways, Chicago is easily accessible from any major city in these six counties. Aside from suburban infrastructure improvements, the expansion of transportation networks from Chicago outwards is the primary reason why suburbs of Chicago have increased so rapidly.

CATHERINE PETERS

Impact of Carbon Footprints across the Lower 48 States: Gender Discrepancies

Faculty Sponsor: Dr. R. B. Schultz (Geography and Geosciences)

Could there be a difference in carbon footprints made by humans of varying sex and ages across the United States? Over a lifetime males emit more carbon dioxide than females. However, studies show that in the last ten years females aged 20–29 contributed more carbon dioxide emissions than males in the same age group, while the 40–49 age group males were higher contributors. The 65 and above age group males resulted in the highest levels. Males regardless of age group were present in the central portions of the United States while females indicating the highest level of carbon dioxide were concentrated in the Southeast and the Southwest.

BRIAN FIREK

Potential Mega-tsunami Hazard Area for New York Coast

Faculty Sponsor: Dr. R. B. Schultz (Geography and Geosciences)

The overall goal of the study is to analyze the impacts of a potential mega-tsunami and apply that understanding to an area that could be vulnerable to this type of incident. The use of geographic information systems (GIS) to examine the different aspects of a mega-tsunami is crucial to the study. Planning and developing support systems both before and after a mega-tsunami crisis is critical to the survival of the people and their societies. ESRI's ArcGIS software was used to examine and analyze the data. It is hoped that this research will eventually raise awareness about the devastation a mega-tsunami could have on the costal topography of the United States east coast. The study also aims to educate people about the potential destruction and implications to the physical environment as well as how a mega-tsunami would affect an area culturally and economically.

NURSING

NATASHA RADNOV

Posttraumatic Stress Disorder in Children Following Pediatric Medical Traumatic Stress

Faculty Sponsor: Dr. Penny Reiss (Nursing)

Experiencing the trauma of severe illness or injury can elicit symptoms of medical traumatic stress in children, which often occur as adaptive responses initially, but can lead to the subsequent development of acute stress disorder (ASD) or posttraumatic stress disorder (PTSD). Nursing interventions that incorporate care for the emotional trauma is an integral part of pediatric nursing care. Pediatric nurses are in a position to minimize potentially traumatic aspects of the care they provide, recognize stress symptoms and intervene as necessary, and help families support their child.

ANCA CONTRA and LESLIE SHEARER

Spirituality in Nursing

Faculty Sponsor: Dr. Penny Reiss (Nursing)

The purpose of this paper is to gain a better understanding of the often overlooked but important concept of spirituality and how it relates to a patient's care. The research articles obtained focus on patients with different types of cancer; however, spirituality is an element of the human experience that all patients (with the desire to explore their spirituality) can benefit from having addressed.

KELLY GLEASON

Literature Review of the Effects of Exercise on Bone Mineral Density in Women Breast Caner Survivors Who Have Received Chemotherapy

Faculty Sponsor: Dr. Penny Reiss (Nursing)

Breast cancer survivors who have received chemotherapy often suffer from significant bone mineral density (BMD) loss and osteoporosis. Healthcare professionals have begun to recognize and develop interventions for the potentially serious side effects and complications of BMD loss. The purpose of my research is to identify non-pharmacological interventions to maintain bone mineral density and prevent development of osteoporosis. The literature reviewed evaluates three studies conducted within the last six years that investigate the effects of aerobic exercise, resistance exercise, and weight lifting on bone mineral density. These studies suggest that consistent, minimal amounts of aerobic exercise and weight lifting can be beneficial to breast cancer survivors and help to maintain their bone mineral density.

HEATHER YAP

The Impact of Art Therapy on Cancer Patients

Faculty Sponsor: Dr. Penny Reiss (Nursing)

Cancer is a major illness that has a profound impact on people who have been diagnosed with the disease. Cancer not only affects them physically, but it also affects them emotionally, psychologically, and spiritually. In seeking relief, some cancer patients have combined standard medical treatments with complementary treatments such as art therapy. Certain quantitative studies have shown that art therapy can help cancer patients cope with the disease because art therapy allows them to express their strong emotions which they cannot put into words. Other potential benefits of art therapy include: reducing anxiety and stress levels, decreasing hospital stays, controlling pain, and improving the process of communication. Regardless of its benefits, however, art therapy is not completely understood by the public. Therefore, the purpose of this presentation is to address the impact of art therapy on the lives of cancer patients in order to increase awareness by the public.

ROSITA GOMEZ

The Effects of Animal-Assisted Therapy on Patients with Dementia

Faculty Sponsor: Dr. Penny Reiss (Nursing)

In recent years, the elderly population in the United States has significantly grown, and consequently, dementia has become an increasingly significant issue. Agitation and poor social behaviors are common among this population, and this causes difficulties in the care and management of these patients. Recent studies suggest that the use of animal-assisted therapy is effective in increasing social behaviors and decreasing problem behaviors among dementia patients. Three current studies were reviewed and their findings were analyzed and compared. Each study revealed similar findings in support of the use of animal-assisted therapy. Based on the review of these studies, recommendations can be made to implement the use of a therapy dog in hospitals and nursing homes with a dementia population. However, due to the small sample sizes of the studies being reviewed, further research is also recommended in order to enhance the credibility of this intervention.

PHYSICS

MATTHEW ALLMANDINGER and JOHN O'MALLEY

Video Analysis in the Undergraduate Physics Classroom

Faculty Sponsor: Dr. Venkatesh Gopal (Physics)

Mechanics, the study of the motion of objects, is intimately related to calculus, the mathematical underpinning of mechanics. However, beginning physics students struggle to see this innate organic unity between the two disciplines. As a result, they find it hard to think conceptually and mathematically about physics and "physically" about mathematics, eventually resorting to rote memorization and a blind application of "formulas." In no time, it seems as though a dangerous and hard to displace idea sets in "Physics/Math is hard and I can't do it." Recent physics education research is beginning to show that these problems can be overcome by the use of electronic data collection technology and low-cost digital cameras combined with specialized data analysis software. Encouraged by these results, we have begun to develop a suite of teaching materials at Elmhurst College that include experiments, video demonstrations, lecture notes, and a lab manual. Our poster will discuss the current state of this project.

MATTHEW GRAFF and ALEXANDER GRABENHOFER

Development of a Novel Imaging System to Study Odor-Following Behavior in Drosophila Larvae

Faculty Sponsor: Dr. Venkatesh Gopal (Physics)

The air around us is rich in olfactory sensory information. Air currents transport odorants, pheromones and a vast variety of other olfactory cues that are often vital to the survival of many species. Using

chemical signals transported by air currents, moths detect the presence of mates, fruit flies unerringly find their way to fermenting fruit, and dogs follow an odor trail. How do organisms that utilize airborne olfactory information track odor plumes to their source?

Olfactory source localization—following an odor to its source—is a vital behavior for many species. It is used to locate prey, mates, and other resources. To date, however, research on olfactory search strategies has been limited by two problems. The first has been the inability to visualize odor plumes in air without the addition of visual markers such as smoke or bubbles. The second is that it is very difficult to quantify the odor concentration in real-time. We have recently overcome both these obstacles by the use of the schlieren imaging, a technique by which the changes in the refractive index of a medium can be visualized. Thus, by embedding odors in a gas whose refractive index is different from air, hitherto in visible odor plumes can be visualized using schlieren imagery. More importantly, the local concentration profile of the gas can be extracted from the schlieren image allowing the construction of a quantitative map of the odor field. By coupling the schlieren imaging system with a high-speed video camera, we can study odor following behavior in many species with unprecedented spatial and temporal resolution. The larvae of the common fruit fly *Drosophila Melanogaster*, is an excellent model system with which to study odor following behavior. We have developed a novel real-time schlieren imaging system to study how *Drosphila* larvae follow odors. Our experimental set-up has solved both these problems allowing us to image, simultaneously and in real-time, both the concentration of an odor field that is being transported by air currents and the behavior of the animal to the dynamic odor stimulus, without the addition of any flow seeding particles. This imaging system is expected to significantly advance the state-of-the-art in research on olfactory search behavior.

MICHAEL MEADEN and MITRA J.Z. HARTMANN

The Whisker Anemometer — Rat Whiskers as Sensitive Detectors of Air Currents

Faculty Sponsor: Dr. Venkatesh Gopal (Physics)

Rats have a regular array of facial whiskers (mystacial vibrissae) that emerge from sensory follicles embedded in the cheek (mystacial pad). Each whisker-follicle pair is a highly sensitive mechano-transducer. Because they have very poor vision, rats usually explore their surroundings by touching objects with their whiskers, often employing a behavior called "whisking" in which they actively sweep their whiskers against objects at a rate of 5–12 Hz. Our central hypothesis is that, in addition to their direct tactile function, rat whiskers can serve as sensitive detectors of air currents, and thus the rat's vibrissal array can be used to measure information about local airflow. In addition to their direct tactile function, whiskers may also serve as sensitive detectors of air currents, and that the rat's vibrissal array can be used to measure information about local airflow. To test this hypothesis, we measured the interactions of vibrissae with air currents in anesthetized rats. Turbulent air streams were blown onto the vibrissae of an anesthetized rat at various angles. Whisker deflections were measured using high-speed video cameras at a frame rate of 1KHz. Whisker kinematic parameters were measured and compared across vibrissae on both sides of the face. Our preliminary results show significant differences in response frequency and amplitude across the right and left sides of the vibrissal array depending on the orientation of the air stream. We discuss these results in the context of odor localization behaviors.

CRYSTAL L. POPE

Studying Quasar Variability: The Lives of Black Holes in Distant Young Galaxies

Faculty Sponsor: Dr. Brian Wilhite (Physics)

At the center of galaxies, including our own, reside massive black holes that exert gravity so great that nearby gas and dust will fall into them, creating an accretion disk. It is this accretion disk that we see when we observe a quasar. However, the light emitted from the disk is not constant; many have been known to vary over time. There is some disagreement over whether or not there exists a correlation between the light variability and the mass of the black hole or between the light variability and the brightness of the disk. Through research, we have concluded that there is an obvious correlation between

the variability and the brightness of the disk and a possible correlation involving the mass of the black hole. These conclusions are beneficial as they are contradictory to information garnered by some and yet are right on a par with most observations. Our research can be taken further by utilizing a larger data set and comparing results with other astronomers.

POLITICAL SCIENCE

FLAVIA POCARI

An Application of Mary Daly's Feminist Critique of Religion to Present Day Christianity and Islam

Faculty Sponsor: Dr. Mary Walsh (Political Science)

This paper adopts Mary Daly's feminist theoretical approach in critiquing Christianity's and Islam's oppression of women in present day cultures throughout the world. Viewing patriarchy as the systemic oppression of women in every sphere of society, Daly exposes the ways in which various religions embody patriarchy, and how in turn that inhibits women's empowerment. In this paper, Daly's theory will be used to look at the teachings of Christianity and Islam and demonstrate how women continue to be impacted in cultures in which Christianity and Islam are most prominent.

SYLVIA CICHOSZ

Theory and Practice

Faculty Sponsor: Dr. Mary Walsh (Political Science)

Feminism requires both theory and practice. On one hand, feminist theorists produce a diagnosis of the continued oppression of women and a vision of how things could be different. On the other, feminist activists fight women's oppression with direct action. This paper presents Heidi Hartmann as a feminist who successfully combines theory with practice. Not only has Hartmann added to the theoretical knowledge of socialist feminism, she has also actively resisted oppression—she lectures widely on women, economics, and public policy, frequently testifies before the U.S. Congress, and is often cited as an authority in various media outlets. Hartmann is the president of the Institute for Women's Policy Research, a Washington-based organization that focuses on research about poverty, employment, family issues, health and women's civic and political participation—research aimed at understanding and combating women's oppression. In fact, Hartmann's continuing examination and analysis of the Obama administration's economic stimulus package and budget agenda reveals the insight theory into specific public policies. In sum, in order to eradicate women's oppression, feminism needs to combine theory with practice; as such, Heidi Hartmann is a model for such a feminist.

PSYCHOLOGY

JENNIFER VAN EWYK and CHRISTINA NELSON

The effects of nonverbal communication on perception and recall

Faculty Sponsor: Dr. Helga Noice (Psychology)

Previous research has shown that nonverbal behaviors have an effect on a listener's perception of the speaker. The effect of nonverbal communication was investigated using a between-subjects design. Elmhurst College students were assigned to view either a video of a speaker using positive nonverbal behaviors or negative nonverbal behaviors. Positive behaviors included hand gestures, voice inflection, good posture, and eye contact. Negative behaviors were the lack of these behaviors. We hypothesized that the participants in the positive group will rate the speaker significantly higher on social attractiveness and competency and that they will recall more information relayed by the speaker. These results will have important implications for nonverbal behaviors used in academic and business conversation.

MELISSA BUNAG, CHRISTINE FOELLINGER and MAGGIE McTEAGUE

Motivation and Purpose

Faculty Sponsor: Dr. Frances Daniel (Psychology)

Students are complex individuals who are defined both by their academic achievements and their lives outside of the classroom. Prior research shows that the activities people engage in during their free time influences their academic achievement (Bergin, 1992). That is, people who choose activities that they enjoy tend to have higher academic achievement than those who do not choose things they enjoy. Thus, a person who lacks motivation in academics might be fully motivated in sports or something else (e.g., leisure activities). Likewise, simply being motivated in one activity may carry over to other areas. The purpose of this study is to determine whether religious motivation affects the way that students view their purpose in life, their approaches to studies, and their motivation in work and leisure activities. We used a series of questionnaires to assess religious and non-religious students' academic, work and leisure motivations, as well as their views on purpose in life and subjective well-being. We predict that students are affected by their religious backgrounds, such that students who are more involved in their chosen religions (e.g., Christians and Muslims) are more likely to view themselves as having a purpose in life, and have more motivations in school and in leisure activities than those who do not affiliate with a religious group (e.g., Atheists and Agnostics). By exploring different dimensions of motivation in students, we can further understand exactly what motivates students to do well.

LESLIE PALMER, BRANDI RUIZ, and AMANDA SCHELLINGER

The Link between College Students' Schedule and Their Ability to Multitask

Faculty Sponsor: Dr. Helga Noice (Psychology)

Many people in the 21st century, due to increasing scheduling demands find themselves multi-tasking. College students are in need of this ability in order to fulfill their academic requirements, extracurricular, and professional obligations. In this study we will investigate the link between a busy schedule and the ability to multi-task in Elmhurst College students. The students will be administered a dual-component task. The visual task consists of computing simple math problems presented one at a time on PowerPoint. The auditory task will consist of listening to a recorded passage. Students will have to count the number of times a designated word appears in the passage. The participants will be measured on accuracy and speed of performing the two tasks presented simultaneously. We expect that individuals with a busier schedule will be faster and make fewer errors than students with fewer obligations. Understanding this connection will allow advisors to provide guidance to students on how to increase their efficiency and performance in school.

ALEX PORTER, SHRUTHI BHANDARU and CHRISTINA NERI

Effects of a Structured Environment on Students with Autism

Faculty Sponsor: Dr. Helga Noice (Psychology)

The distractibility of students with autism was tested in a two-day observational study. Seven student participants, 6 male and 1 female, ranging from 2nd to 5th Grade, are aided by their one-on-one instructors, were asked to complete a structured and unstructured drawing task during their regular class time. Student behavior was recorded and occurrences of inattention were counted and totaled. Whether students were in a structured or unstructured activity changed the number of distracted behaviors for individual students. However, overall an equal number of students exhibited distracted behavior for the structured and unstructured task. This suggests that students with autism require individualized instruction.

MICHAEL BIXTER, NESINA KRITIKOS and NICOLE PETERSON

The Effect of Working Memory Differences on Remember/Know Judgments for Falsely Recognized Words

Faculty Sponsor: Dr. Frances Daniel (Psychology)

Recently, researchers have explored the effect of individual differences in working memory capacity (WMC) in the creation of false memories. Specifically, when participants are not warned about the creation of false memories, they tend to falsely recognize words regardless of WMC. In contrast, when participants are warned beforehand, high-WMC participants are less likely to falsely recognize words than low-WMC participants. The purpose of the present study is to extend prior research by incorporating "remember/know" judgments for studied and non-studied words. "Remember" refers to an explicit, episodic memory, whereas "know" refers to an implicit memory, or feeling about a memory. Results showed that in addition to producing less false memories, high-WMC participants gave falsely recognized words more "know" judgments than low-WMC. Likewise, low-WMC participants gave falsely recognized words more "remember" judgments than high-WMC. These results suggest that individuals with low-WMC are more susceptible to recollecting non-presented words as well as creating stronger episodic memories of words that were not presented to them.

SHAUNA POTRAWSKI

Parent Reinforcement and Gender Stereotypes

Faculty Sponsor: Dr. Catherine Gaze (Psychology)

Gender socialization plays a major role in the development of children's perspectives on gender as parents, teachers, and playmates enforce what behaviors and activities are "appropriate" for each gender. This study examined the effects of parents' reinforcement on children's choice of toys and stickers. Participants included 37 children and one of their parents. During a 5-minute video clip of a free play session with a parent and child, child appearance, toy choices, and sticker choices were noted along with parent's gender reinforcing comments. There was not a significant difference between toy/sticker choices and parent reinforcement or sticker choice/child appearance and gender. Results did show that parents are overall more reinforcing for boys than for girls, supporting the idea that gender stereotypes are stricter for boys. Likewise, results showed boys played with more gender stereotyped toys than girls, although some limitations to the study may have influenced these results.

JULIANNE NELSON

A Review of the Etiology and Treatment of Anorexia Nervosa and Bulimia Nervosa

Faculty Sponsor: Dr. Catherine Gaze (Psychology)

Anorexia nervosa and bulimia nervosa plague about 1–3% of women. It has been estimated that 4–19% of women engage in clinically significant levels of bulimic behavior; and anorexia nervosa has the highest mortality rate of all mental disorders. With the growing prevalence of these disorders, it deserves attention and further work on an empirically beneficial treatment. This paper will first review DSM-IV criteria for the development of anorexia nervosa and bulimia nervosa. The etiology of eating disorders is then discussed in consideration of the biopsychosocial model. Finally, treatment is focused on with a review of data from studies of various treatment models.

DEVIKA KRISHNADAS

Emotional Intelligence and the Preference of Leadership Style

Faculty Sponsor: Dr. Thomas Sawyer (Psychology)

This study examined the relationship between a person's emotional intelligence (E.I.) and their leadership style. Mayer and Salovey's (1998) emotional intelligence model suggests four dimensions: the ability to perceive emotions, using the perceived emotions to generate emotions, being able to understand the working of emotions, and finally the ability to manage emotions. This study particularly focused on the ability to perceive emotions and the ability to manage emotions in themselves and others. Additionally, we used Lewin's leadership model which states that there are three different leadership styles. These states are authoritarian, democratic, and laissez-faire. This study focused on the authoritarian leadership style and the democratic leadership style. The authoritarian leadership style essentially involves no involvement at the end of the employees in the decision making process. The managers tell the

employees what needs to be done, and expects it to be followed. The democratic leadership style involves a compromise between manager and employee where they have almost equal role in the decision making process. It was hypothesized that a person scoring high on the ability to perceive emotions will prefer to use a democratic leadership style. Also, It was expected that person with a high ability to manage emotions would prefer to use an authoritarian leadership style. Participants were asked to fill out a 35 item questionnaire that determined their leadership style and complete the MSCEIT, a measure of their emotional intelligence. We collected data on managers from a local organization and Elmhurst College students to explore differences due to amount of management experience.

ASHLEY BERGMANN and AMANDA ODEGAARD

Emotional Memory: The Affect of Gender

Faculty Sponsor: Dr. Helga Noice (Psychology)

Gender differences have been widely studied in psychology—especially social psychology. Davis (1999) examined the relationship between gender and autobiographical memory. It was concluded that women have greater accessibility to emotional memories than males. We studied gender differences in the ability to recall words generated after a neutral prompt (house) and an emotional prompt (fear). Males and females generated a list of words for the neutral and emotional words. After a distracting activity, the participants recalled as many words from both lists as possible. We predicted women would recall proportionally more words generated from the emotional prompt than men. The research findings will help counselors in treating their clients with communication and memory problems.

PEDRO MERCADO and JACOB GARBACZ

The Effects of Different Musical Conditions on Elliptical Exercise Rate

Faculty Sponsor: Dr. Helga Noice (Psychology)

A large body of research has attested to the benefits of daily exercise. The purpose of this study was to examine the significant effect of music on exercising. The subjects were Elmhurst College students enrolled in Introduction to Psychology classes. The exercise rate was measured and obtained by the strides per minute on an elliptical machine under 3 conditions: fast music, slow music and no music with the order of music counterbalanced. The results of this study will add to the knowledge of what constitutes an ideal workout.

EMILY FLAHERTY, ANDREA SPAPPERI, and ALYSSA SCULLY

Complementary and Similar Personality Types in Relational Selection

Faculty Sponsor: Dr. Helga Noice (Psychology)

Personality compatibility is an important aspect in all interpersonal relationships. In the process of selecting an ideal spouse, people often question whether individuals with similar or complementary personalities will form a more rewarding relationship. Our study will seek to discover whether or not Elmhurst College students are drawn toward others with the same or different personality types, specifically in the area of extroversion and introversion. We will utilize a measurement of individual extroversion as well as an ideal mate personality questionnaire based on the Eysenck Extroversion scale and the Introversion-Extroversion indicator. We expect to find that individuals will show desire for a spouse with a similar personality type to their own. Understanding whether or not individuals desire a similar or complementary personality in a mate might give further insight into how to create ideal relationships, both personally and in a group setting.

KATHERINE KASPER

Dream Interpretation and the Unconscious

Faculty Sponsor: Dr. Catherine Gaze (Psychology)

Dream interpretation has been of interest to psychoanalysts for many years. Interest has stemmed from the idea that dreams are a window into a person's unconscious. Empirical research, such as stimuli analysis, has been designed to address questions about why we dream and how dream content is formed. This paper will provide an overview of this area of research.

TIFFANY DUCATO, KENDRA OSTRANDER, and MONIKA SIENKO

The Effect of Noise Distractions on College Students' Academic Performance

Faculty Sponsor: Dr. Helga Noice (Psychology)

College students often take exams in the presence of unwanted distractions. The effect of noise distractions was examined in 30 Elmhurst College students by using two names from which anagrams were derived: "Michael Jordan" and "Alfred Kinsey", which both generate just under 1,400 words each. Each student was given five minutes to complete one anagram in silence and five minutes to complete the second anagram with noise distractions. The order of anagrams was counterbalanced across two sessions of students. It is expected that students will generate more anagrams in the silent condition than in the distracted condition. Understanding the effect of noise distractions on college students' academic performance could have practical applications for pedagogy.

MICHELLE SWANSON and RASHIDA JOINER

Music, Color, and Mood Association

Faculty Sponsor: Dr. Helga Noice (Psychology)

Many researchers have shown a correlation between music and mood. The current research was designed to determine whether there is a correlation between music, color and mood. Participants were Elmhurst College psychology students who volunteered for the experiment. Participants listened to three musical selections (classical, pop, and hard metal) and chose their color selection from a given list of colors. Then the participants chose their mood based off of the given mood terms. For the last question they were asked to describe in detail how they were feeling. Considering previous research has shown mood and color to be associated and mood and music to be associated; this experiment will show if all three (music, mood, color) are associated as predicted by the research team.

ANNA ZIAJA

Family Disruption Influences on Children's Self-Esteem, Self-Perception, and Grades

Faculty Sponsor: Dr. Helga Noice (Psychology)

Many children today go through their childhood and/or adolescence with only one or neither of their nuclear parents. This study measured the impact of family disruption on children's psychological well-being. Participants, who attended Driven and Empowered Youth (D.E.Y.), an after school tutoring program offered in six different Chicago public high schools, filled out three different surveys which assessed a number of different cognitive, psychological and social factors. The predicted results are that students, who at some point in their lives live with only one or neither of the biological parents have lower self-esteem, lower self-perception, receive less parental attention, and lower grades in high school. These findings could be taken into consideration by the school board members in order to better satisfy the needs of the children.

CHRISTY FRATICOLA and BRITTNIE BROCKSOME

How Divorce Influences Attitudes about Significant Relationships in College Aged Students

Faculty Sponsor: Dr. Frances Daniel (Psychology)

Divorce is becoming more common every year. Therefore, it is important to understand how children of these divorced parents are affected by the parents' split. Prior research shows mixed results regarding how divorce affects children. Some research shows the child-parent relationship is negatively impacted by divorce whereas others show the child-parent relationship is not impacted by divorce. However, prior research has not explored how attitudes towards significant relationships (e.g., romantic) of the children from divorced families have been affected by divorce. The purpose of this study is to extend prior research by exploring how divorce influences college students' attitudes and views towards their significant relationships. Participants from divorced and intact families completed a series of questionnaires to assess their levels of trust, attitudes towards marriage, and intimacy levels. We predict that college students from divorced families have a less positive attitude towards marriage, report less intimacy with significant partners, and trust those significant relationships less than students from intact families.

AISLIN BRIGHT, MARISA CIFALDI, JESSICA NAJARIAN and SARAH JEROUSEK

Gender Differences in Memory for Food Items and Perceptions of Body Image

Faculty Sponsor: Dr. Frances Daniel (Psychology)

Prior research has indicated that women are more body conscious, which tends to make them more likely to diet and to be more aware of the foods they eat. However, prior research tends not to focus on men's eating habits. The purpose of our study is to extend this research by exploring differences between both genders in how they view food and body image. Men and women will be given dating profiles, each of which will include a favorite food, either healthy or unhealthy. Then our participants will solve simple arithmetic problems for five minutes to prevent the influences of short-term memory. Finally, they will recall as many details from the profile as they can and choose the most dateable profile. We hypothesized that women will recall more food items than men. Additionally, we predict women will rate a person who eats healthier foods higher than those who eat unhealthy food items. Men will not show any differences in their ranking as a function of healthy or unhealthy food items. This research is important because of the unrealistic expectation for the American population to be thin and healthy. The media tends to emphasize unhealthy foods (e.g. fast food advertisement) and emphasize unrealistic body images (e.g. supermodels). Therefore it is important to further expand how a person's gender and concepts of health are influenced by this dichotomy.

DREW FARR, ALEXANDER PORTER, and KIMBER DAVISON

False Memory and Stress in College Students

Faculty Sponsor: Dr. Frances Daniel (Psychology)

Prior research shows that inducing stress on participants while performing a task that seems important increases the rate of false recognition of words. Thus, stress plays an integral role in the creation of false memories. The purpose of this study is to explore how self-reported stress levels influence the creation of false memories. Participants reported their current levels of stress in general and academically. Then, all participants will be given a list of related words to memorize (e.g., banana, pizza, ice cream) based on a non-presented associate (food), which is referred to as the critical lure. Participants will then be asked to recognize a list of words (some of which were studied, some of which were not studied), and the critical lure. We predict that participants with higher self reported stress levels will falsely recognize the critical lures more than those with low levels of reported stress. This research is important because it addresses how natural, everyday stress can influence students' academic performance.

LEIF MUELLER, SARA BALOCCA, NATASHA RADNOV and KIMBERLY SKOCZELAS

The Relationship between Visual Response Time and Stimuli

Faculty Sponsor: Dr. Frances Daniel (Psychology)

Prior research shows mixed results as to whether attentional control can be influenced through athleticism. That is, some find that athletes have better attentional control whereas other do not. The present study examined the relationship between attentional control and eye movements in athletic and non-athletic participants. Athletes and non-athletes responded to the appearance of a target while maintaining their eye fixations (i.e., staring at one spot). Reaction time was measured. Additionally, an arrow appeared before the appearance of the target that either pointed in the direction where the target would appear (valid), the opposite direction (invalid), or did not give a direction (neutral). We predicted that athletes would respond faster than non-athletes to the target. This difference should be the largest during the invalid condition, which will demonstrate that athletes are able to divert their attention more rapidly than non-athletes. This research might support the idea that athletes have a more flexible attentional focus.

ROSARIA GALLINA, ROSA CABRERA, KARI PANDYRA, and NOUR OLWAN

How Music Affects False Memory in College Students While Studying

Faculty Sponsor: Dr. Frances Daniel (Psychology)

Does music positively or negatively affect the impact on recall while studying? Research shows that music reduces word recall. The purpose of this study is to explore how types of music affect word recall. Participants will view a list of words related to a theme (e.g. sleep). Then participants will perform a recognition test with studied words (i.e. words shown). One group of participants will listen to familiar music (i.e. Usher) a separate group will listen to unfamiliar music (i.e. opera), and a separate group will not listen to music. We predict that popular upbeat music will negatively impact word recognition. That is, participants are less likely to recognize studied words while listening to upbeat music and are more likely to recognize unstudied words. Participants exposed to down beat music are more likely to recognize studied words and are less likely to recognize unstudied words. We expect the group with no music to produce the highest recognition scores of studied and lowest recognition of unstudied words.

DONNA PORTER, ALICIA CARTER, LAUREN PRENA, and GINA AFFATATO

The Impact of Short Term Memory on Susceptibility False Memories

Faculty Sponsor: Dr. Frances Daniel (Psychology)

The purpose of this study is to explore individual differences in susceptibility to false memories. Specifically, we will explore how differences in short term memory influence false memories. Participants will be shown three lists of 16 words, and then asked to recall these words to assess short term memory. After a one minute break, participants will view 6 trials of 15 words related to a theme (e.g. sleep), before completing a recognition task, which will contain a critical lure (i.e. related, but not studied). We predict that the participants with poor short term memories will have a higher recognition of the critical lures more than those with larger short term memories. The importance of this study is the recognition that people with a better short term memory capability will be more likely to remember accurate information, or that material which goes into their long term memory. Thus, these participants with a better capacity to remember information will be able to maintain information longer.

MICHAEL BESCH

The Effects of Associative Word Primes on the Perception of Ambiguous Figures

Faculty Sponsor: Dr. Helga Noice (Psychology)

Perception has been shown to be influenced by prior knowledge. The present study investigated the effect of associative word priming on perception of the ambiguous duck/rabbit picture. The participants were 30 Elmhurst College undergraduate students. The participants were assigned to 3 groups and

viewed a series of words either relating to a duck, rabbit, or neither (control) and then were shown the duck/rabbit picture. The interpretation of the picture and the speed with which the interpretation was made were recorded. It is expected that the participants who are given the duck prime will interpret the picture as a duck and that the participants who are given the rabbit prime will interpret the picture as a rabbit and will do so faster than the control group. If these results are to be obtained, it would add to the wealth of knowledge we already have supporting the claim that perception is a construal process.

STACEY CONSTANTINE, ELLEN HUNKA, JULIANA LARA, and DEANDRA CANNIZZARO

Online Social Networking Sites and Their Relationship with Social Anxiety and Personality

Faculty Sponsor: Dr. Frances Daniel (Psychology)

Some research suggests that individuals who spend more time online socially interacting with others have higher levels of anxiety and introversion than those who spend less time online for social purposes. In contrast, other research suggests that extroverted individuals spend more time on social networking sites than introverts. The purpose of this research is to further investigate how anxiety as well as introversion/extroversion influences online communication. We are extending prior research, which typically has explored self-reported use, by measuring participants' behavior while reading a fake Facebook profile. Participants will complete a series of questionnaires that assess social anxiety and introversion/extroversion. Then, participants will read a fake Facebook profile, while reading time is measured. We predict that those who score higher on social anxiety will be more likely to report using online networking sites or chat rooms to make social connections, rather than face-to-face interactions, than those who score lower on anxiety. In addition, we predict that these highly anxious individuals will spend more time overall reading the Facebook profile than those who are less anxious. This research will help explain differences in online network use. It could potentially explain some reasons why there is a growing trend to use social networking sites like Facebook.

JENNIFER BENSMILLER, GIANA FERRARI, ASHLEY MIKA, CHRISTINA RIANI, and HANNAH KUBAT

Accuracy and Confidence in Eyewitness Memory Recall for Male and Female Groups and Individuals

Faculty Sponsor: Dr. Frances Daniel (Psychology)

Eye-witness testimony is crucial to the judicial process in courts worldwide. Often, such testimony is considered the "smoking gun" of a case, meaning the presence of eye-witness testimony ensures a probable conviction. However, research shows that eye-witness testimonies may not only be inaccurate, but may be highly susceptible to suggestion. Factors such as confidence inflation, personal attributes, and the number of times witnesses are questioned may all negatively impact the credibility of eyewitness testimonies. Additionally, research shows gender differences in the areas of logic, analytical thinking, and, most relevant, attention to detail. Specifically, women notice details more than men, which mean gender might influence eyewitness testimonies as well. The purpose of this research is to explore how gender and groups influence memory and confidence in those memories after witnessing an event. We hypothesized that students working in groups would answer more questions correctly than students working individually, that groups would be more confident in their answers overall than individuals, and that males would recall fewer details than females. We tested two groups of college-aged participants, one divided into two-member teams and the other working individually. The participants watched a brief video on tips for staying safe on college campuses and then completed a questionnaire asking them to recall details and events from the film, either individually or in their group. Each question was also accompanied by a confidence scale. This research has implications for how both gender and groups influence both correct and incorrect memories.

THEATRE

JON-MICHAEL MANOCCHIO

Creating Soldiers: Dramaturgy for the Elmhurst College Production of "Tracers"

Faculty Sponsor: Ms. Janice Pohl (Theatre)

"As time goes by, the Vietnam War has become more and more historical. It is my sincere hope that this revised edition will help generations to come to understand the war and its veterans" *Tracers* conceiver, John DiFusco.

While many dramaturgs find themselves behind the scenes a great deal— sifting through scripts, making translations, and doing production research—*Tracers* gave me a unique opportunity to expand upon the usual duties of dramaturg. I took on John DiFusco's mission to create a contemporary understanding of the Vietnam War along with my colleagues on the production team. I saw it as my duty to ensure that the actors and production team of *Tracers* had the necessary tools and understanding of the war and the culture surrounding it to be able to assist this play in helping "generations to come to understand the war and its veterans." The main challenge of doing justice to *Tracers*, however, would be turning the seven men in the cast into viable soldiers with knowledge of not only the war, its culture, its causes, and its effects, but also the military way of life. So how do you turn seven twenty-something year-olds in 2009 into believable Vietnam era soldiers? Our answer was something we affectionately referred to as "Boot Camp."

My personal "Boot Camp" began in the fall semester of 2007, when I traveled to Chiang Mai, Thailand and enrolled in Payap University's Thai and Southeast Asian Studies Program. I studied Buddhism and Southeast Asian history and politics, and volunteered as an English instructor at Mohammakut Buddhist University, housed within the famous Wat Chedi Luang Temple. During breaks I traveled extensively throughout Southeast Asia, including a trip, on my own, up the coast of Vietnam, stopping in various places of importance from the Vietnam War: Saigon/Ho Chi Minh City, the Cu Chi Tunnels, The War Remnants Museum, Da Nang, Hue, the DMZ, and finally Hanoi. Throughout my studies at Payap and my journeys through Vietnam, I came to know a great deal about the war and, over time, became deeply affected by it. When I came home, there were many opportunities for me to talk about my experiences in Thailand and my work with the monks, but I never had the chance to talk about what I experienced in Vietnam. Then, I found out that we were doing *Tracers* in the 2009–2010 season at the Mill. Finally I would have the opportunity to talk about and pass on what I had experienced in Vietnam.

This is not to say that I was alone in coordinating "Boot Camp" for the cast. The director and production team played pivotal roles, especially our Military Advisor, David Boylan, who served in the US Army for many years in the United States and Germany. While I attempted to educate and give an understanding of the culture surrounding the war, Dave drew on his real life experiences and gave the cast a taste of true military training and what it meant to be a soldier. "Boot Camp" activities were planned throughout the rehearsal process and included shaving the heads of the cast members, putting them through marching exercises and typical military physical training, teaching them to handle the weapons involved, and of course some good old drill sergeant discipline. I gave several lectures throughout the rehearsal process on various aspects of the war, its causes, and its effects. Our hope was that this joint effort would result in the formation of true soldiers, able to bring a profound and deep understanding of the Vietnam War and its veterans to a new generation—themselves included.

Art Exhibitions

BRANDI CARUSO

Faculty Sponsor: Mr. Geoffrey Sciacca (Art)

The subject of this collection of work is body image. Women today are especially affected by what the media considers "beautiful." I have created a non-profit organization called Nourish whose mission is to educate and inform college-aged women about healthy lifestyle choices, and which offers support for women with body image issues. To accomplish this, I have branded Nourish and created a social awareness campaign that consists of three ads, four posters and a short book. These pieces explore the relationship between women and potential body image issues. Many times campaigns focus exclusively on eating disorders, but I am trying to show that those disorders all begin with low self-esteem and obsessive thoughts about weight and/or image. I am hoping to create an intimate feeling between the audience and the work itself by using close up photography of the body as well as limited color—black white and yellow to convey feelings of despair and loneliness, as if you were gazing into a personal moment you were not supposed to see. The only color comes from the yellow measuring tape, which visually expresses how what women think about their body becomes an obsession, a number. Now that I am going to be a mom, I have gained a new perspective on the subject of body image. Body image and self-esteem are issues that are rarely explored, pushed aside for more "extreme" issues like anorexia or bulimia. My concept is to visually portray the feelings of imperfection and pain that women are quietly experiencing day to day. The media chooses to use outlets such as ads and posters to send a negative message about beauty to young women, and I feel that I am using the same tools to reinforce the opposite.

MARIA CLARITE MAROTTA

Faculty Sponsor: Mr. Dustan Creech (Art)

We all have superstitions—these nagging mandates that tell us to avoid something for a reason we don't quite know or understand. This installation is meant to explore the parallels between superstitions and religious beliefs. Having been raised Catholic; I can remember my early years of blind acceptance of these teachings. However, as I grew older and began to truly examine my ideas and perceptions, I realized that there are certain Catholic teachings I fervently disagree with. In addition to the scare tactics employed in threats of fire and brimstone, the root of Catholicism preaches that homosexuality is sinful and immoral. I simply cannot adopt this outlook, as I believe that love is a connection that can exist between two people regardless of gender or sexual orientation. The surreal interactive atmosphere I have created symbolizes a variety of superstitions and Catholic beliefs. It is my hope that every viewer will be an active participant in overcoming these beliefs and superstitions. I encourage you to free yourself from the fears of the irrational by entering beneath a ladder, walking through Eucharist wafers on paths crossed by black cats, appreciating the beauty of same-sex couples, and exploring the ethereal space created for you. It is important to understand that this is not an anti-religious statement. It is simply a message urging each and every person to look into their hearts for acceptance and compassion, and to think deeply about what they believe in, rather than be the complacent followers of another's ideas.

DANNY DeCLEENE

Faculty Sponsor: Mr. Dustan Creech (Art)

Our senses are a wonderful gift. They are nearly everything we are given in an attempt to understand ourselves and our world around us. I have created this work to remind people how incredibly lucky we are to have life and to think about the unseen processes that happen under our skin to give us our senses. I show how we receive information through our sense organs, and the process of how these organs transmit waves of information to our brain through our nerves and neurons. For the past year, my artworks have been influenced by things that go beyond our perception, things we cannot see, feel, taste, smell, or hear. Yet we know these things are there, such as emotion, bodily functions, or the roots of a

tree. I chose to do monoprinting because I am able to layer many images and use a variety of color in my work. Monoprinting allows me to combine different printing techniques and bring them together to create one piece. The layering of monoprinting coincides with the multiple layers of the human body that allow us to perceive our senses. The imagery and style used in my work is something I have been doing for as long as I can remember. I have frequently used multiple squiggly lines in an attempt to visually represent something that we cannot perceive. I use lots of color because it makes the works more visually stimulating and interesting. I draw my inspiration from sixties rock poster artists like Wes Wilson, and other surrealists such as Salvador Dali and Alex Grey. I like the way these artists use their imagination to portray an image more abstractly than the way it is typically seen or imagined.

AMANDA S. DZIAK

Faculty Sponsor: Ms. Marcia Palazzolo (Art)

I have created 20 images of different verbal expressions and have placed them onto light boxes because those chosen words have inspired me in many ways. These photographs contain abstracted lights in the background and a neon sign in the foreground. Neon signs are used more for advertising rather than relating to personal reflection, so it was a challenge to find expressions that related to family and friends. This artwork was created to represent important people in my life. My goal is to create images that others can relate to because everyone should have someone in their life that encourages them to not give up on their goals and dreams. When creating the background, I looked at lights from a different perspective. You can see different designs and shapes that appeal to the eye. I created the light boxes because I wanted a different way of displaying these pictures. Light boxes make the images and colors stand out more rather then a photo in a frame. My photography is usually based on nature. These photographs are more abstracted in aesthetic and technique. Two images were created digitally with a camera and computer to form these designs. This series fits into contemporary art because the photographs are digital and two images are layered together to produce one image.

EMILY BECKER BRUZZINI

Faculty Sponsor: Mr. Dustan Creech (Art)

Tradition, family, and memory are three very important inspirations in my work. In the past, I have explored traditions such as quilting, gardening, and going to Grandma's house. My capstone piece explores the tradition of the family gathering through the use of printmaking, fabric, and sound. The din of my family talking and laughing plays in the background. The familiar sight of a pile of shoes is seen in front of the piece depicting a table with casseroles of food laid out for an event. My work in this exhibition goes beyond the traditional use of fabric as a utilitarian material associated with craft and clothing. The use of fabric in the piece is to remind the viewer of the tradition of quilting and its value as a detailed artistic expression that can also provide warmth, comfort and protection. Fabric itself is made by weaving threads together to make a whole. A family is a collection of people who have been woven into one fabric. My journey in printmaking has led me from the traditional etching and block printing to printing on fabric for use in quilts, which has allowed me to incorporate my love of both textiles and printmaking. My influences include Faith Ringgold, who makes quilts into storytelling pieces, and Ann Hamilton, who uses a variety of ordinary materials to create remarkable installations. I want viewers to think about the relationships of support that they have with their families as they respond to the sounds and images in my piece. We create our own families and traditions and our connections with others shape who we are. My work strives to remind the viewer of the importance of tradition and families in the shaping of ourselves.

KIM KATAYAMA

Faculty Sponsor: Mr. Geoffrey Sciacca (Art)

Tarot cards have been around for centuries and continue to be old and undying in the occult world. They are used to aid one in "predicting" one's own future or to help give advice. Author Paula Day gives a

general insight simply by explaining that the word "tarot" has ambiguous origins, and its exact meaning has been a mystery since the 16th century. I have always been interested in the mysterious and unusual, as well as mingling old into new aesthetics, which is why I chose to create a modern adaptation of the "22 Major Arcana" cards of the tarot. They are bigger than the average-sized card, there is a bright monochromatic color pattern throughout the series, and modern imagery mixed with rough textures and numbered titles with descriptions to match in an off-centered abstract approach. I chose to handle my tarot cards in a contemporary manner because for years tarot cards have been using hand-drawn illustrations or paintings, and graphic design lifts the tarot cards into a new perspective. The style I've created for these cards is related to my previous works in the areas of graphic design, typography, and digitally manipulated imagery. I draw inspiration by notable graphic designer, David Carson for his interaction of typography by using distorted, doubled, and strangely placed positions in his work with boldly cropped photography. I am fascinated by the connection between color and emotion. Everything we see on a daily basis is filled with color, and emotions get tied to them quickly as you will see in my work with descriptions to match the color ranging from a deep red for anger and light blue for dreams. The imagery comes from the three basic descriptions I gathered from researching each card's major characteristic, and my modern interpretation through remixed imagery. I believe displaying these cards with hands is the best way to emphasize the cards' true mystique, and I hope that the mystery and allure of my adaptations through these cards will push the boundaries of people's minds to greater states of wonder and charm.

JESSICA WILSON

Faculty Sponsor: Ms. Lynn Hill (Art)

Decay has a variety of textures, qualities and colors that are not normally found in nature. These characteristics are typically found when manmade objects are left untouched by human hands. My body of work consists of digital photography and the use of photo manipulation to capture the beauty of this decay. Abandoned places have always interested me—the lingering questions, the stories and the slow delicate decay of these properties. I have always felt a certain draw to these desolate places and wanted to show the interest I have with them. Abandoned buildings have so many stories to tell. Each piece of furniture, the color of the walls and even the little knickknacks here and there has something to say. My goal is show a different side of these places others may not usually see. I really wanted to avoid clichés like "beauty is in the eye of the beholder," but my work really encompasses this idea. I hope to convey the allure these places have the viewer ask questions as well as make assumptions of their own. Contemporary art is changing. As the world becomes increasingly more modern, digital art is more readily seen and available. Digital artists are using new technology as a way to create new and original art. My hope is that my work is something new even if the idea behind it isn't. Artist's implementing new ideas always fascinate me. We build them and then at some point we abandon them. Standing empty these abandoned buildings slowly decay until they are just a shell of what they once were. Why this abandonment occurs can only be implied.

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Sincerely,

Catherine Crawford and Pat Ackles
Showcase Committee Co-Chairs

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