

The Washburn University



April 18, 2008

2007 Schedule of Events

11:00 a.m.-11:30 a.m.	Registration, Mulvane Art Museum
11:30 a.m.-1:00 p.m.	Visual and Performing Arts (Carole Chapel, Mulvane Art Museum, Garvey Room 32)
1:05 p.m.-1:20 p.m.	Keynote Address, Mulvane Art Museum Dr. Robin Bowen, Vice President for Academic Affairs
1:30 p.m.-3:25 p.m.	Oral Presentation Session Henderson Learning Resources Center
3:30 p.m.-5:30 p.m.	Poster Session Mabee Library
5:30 p.m.-6:00 p.m.	Honors Reception for Apeiron Participants Mabee Library

☐ Denotes Washburn Transformational Experience

* Denotes Graduate Student

Apeiron 2008

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Visual and Performing Arts

11:30 a.m.-1:00 p.m.

11:30 a.m.

Carole Chapel

Learning Advanced Technique and Tone Concepts through Unconventional Sources

Amanda J. Mayo

Mentor: Rebecca Meador, Music

During the months of June and July, 2007, I had the good fortune of negotiating a recording contract with a Midwest publishing company. The company asked me to record a CD for one of their popular elementary books. This CD would, in turn, be published as a CD/book bundle. The company president requested that I record a master that would include the popular elementary tunes with piano accompaniment and then accompaniment alone. During the course of my work, I began to understand in more depth the imperfections and inconsistencies that I had been pursuing during my clarinet studies. Therefore, it is through my work with these elementary-based tunes that I gained a deeper knowledge of air support, tone production, intonation, consistency of articulation/timbre/style, and range of dynamics. In this presentation I will perform three excerpts from the book that demonstrate some of these inconsistencies. Following each I will mention solutions and perform them once more with those solutions.

12:00 p.m.

Carole Chapel

Greek Musical Ideas in Shakespeare's Writings

Jaime Lea Ellison

Mentor: Ann Marie Snook, Music

“Music oft hath such a charm to make bad good,” quoted from William Shakespeare’s play Measure for Measure, is indicative of the importance that he assigned to music in relation to the universe, life, and work. While still remaining complementary to the text and drama of the plays, music furthered the dramatic purpose of nearly all of Shakespeare’s works. Shakespeare had a belief in the healing and transformational power of music, and also in music’s ability to “tame the savage beast.” This was a driving force in the use of music in his dramatic works, and provides a thematic unity among some of these compelling songs. This presentation will provide a brief exploration into the different musical conventions that were utilized in Shakespeare’s plays.

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12:30 p.m.

Carole Chapel

“Mary’s Songs”: A Compositional Journey Through the Life of Christ

Kasandra Lee Williams

Shannon Coffman, violin

Christina Craig, cello

Cindy Strait, piano

Mentor: Ann Marie Snook, Music

This presentation will highlight my experience in composing a song cycle for my senior voice recital at Washburn University on April 5, 2008. I will discuss the process of composing “Mary’s Songs”, pieces which speak of the life of Christ as viewed through the eyes of Mary, His mother. Through my failures, and my successes, I will explain the compositional journey I took as I developed this set of songs. The presentation will be followed by a performance of the cycle “Mary’s Songs” which include the pieces “Lullaby,” “Quiet,” and “Hope.”

11:30 a.m.

Mulvane Art Museum

L’Histoire Du Soldat: “A Dynamic Look”

Alex P. Wise

Anthony Roth - Clarinet

William Brubaker - Bassoon

Jakub Rostik - Trumpet

Philip Sanders - Trombone

Theodore Musick - Percussion

Shannon Coffman - Violin

Carrie Drexler - String Bass

Mentor: Norman Gamboa, Music

Written in 1918 by Igor Stravinsky, *L’Histoire Du Soldat* innovated the use of the chamber ensemble. For seven instrumentalists, this piece features a host of 20th century techniques including mixed meter, multiple percussion, extended instrumental techniques, and neo-classical harmony. Originally to be performed with narrator, dancer, and actors this piece revolutionized how musical theatre was perceived. With its unique orchestration and high difficulty, the piece is always played with a conductor. The non standard combination of instruments provides a unique sound and challenge to both the performers and the conductor wishing to enrich their chamber repertoire and challenge themselves musically. This presentation will feature four select movements from the work with insights into its creation, innovation, and importance to the musical community.

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12:00 p.m.

Mulvane Art Museum

French Impressionism in Music and Art: Maurice Ravel's String Quartet and Its Parallels with Impressionistic Visual Art

Samuel Cho

Shannon Marie Coffman

Sarah G. McQuere

Manuel E. Tabora

Mentor: Larisa Elisha, Music

We will compare and contrast Maurice Ravel's String Quartet with impressionistic art. A French composer at the turn of the 20th century, much of Ravel's music is considered to be in the impressionistic style of music. We will examine how Ravel's impressionistic music relates to the impressionistic art of that time. The presentation will conclude in a performance of portions of Ravel's String Quartet in F major.

11:30 a.m.

Garvey Room 32

^{WTE} *The Headwaters of the Mississippi*

Maxwell A. Frederickson

Mentor: Penelope Weiner, Theatre

"The Headwaters of the Mississippi" is a short scene involving two young adults on summer vacation. As they drive to the headwaters of the Mississippi River in Itasca State Park, Minnesota, they encounter some personal and technical difficulties.

11:45 a.m.

Garvey Room 32

Icing on the Cake

Michael E. Scott

Mentor: Penelope Weiner, Theatre

"Icing on the Cake" is a monologue.

12:00 p.m.

Garvey Room 32

Modern Communication

R. Gregory Krumins

Mentor: Penelope Weiner, Theatre

This is a comedic scene about a relationship conversation between two teenagers over the phone. Thematically, it focuses the disconnection of communication between the children in the modern era.

Apeiron 2008

12:15 p.m.

Garvey Room 32

Reaching For It

Andrew B. Brown

Mentor: Penelope Weiner, Theatre

This is a dramatic monologue written for a man in his middle adulthood. It is set in a modern office. The piece focuses on Erikson's psychosocial theory of human development and the stage known as middle adulthood. Generativity versus stagnation is the conflict. This is a look inside the thoughts of one man who has failed to achieve a sense of productivity, and is experiencing stagnation first hand. The piece allows the audience to hear the internal dialog of the character. It invites the audience to evaluate their own accomplishments and limitations, recognize their choices. Hopefully allowing them to identify changes they can make to avoid feeling like victims of life's circumstances. The character in this monologue is encountering an obstacle within him. He is actually negotiating with himself to try and resolve the conflict he feels.

Oral Presentations

1:30 p.m.-3:25 p.m.

Henderson Learning Resources Center

(There is a chart of rooms and times on page 20.)

1:30 p.m.

Henderson Room 103

Climate Change Policy: An Overview

Rachael Anne. Savage

Mentor: Chris Hamilton, Political Science - Geography

The scientific consensus of the increased greenhouse effect through anthropogenic sources has led to action in multiple government systems. This presentation will provide an overview of current policy found in the European Union, state and local efforts in the United States, and proposed Federal legislation and analysis.

1:50 p.m.

Henderson Room 103

The Threat to Civil Liberties During Times of War and National Emergency

Jessica A. Brunken

Ryan C. Miller

Mentor: David Freeman, Political Science - Geography

Some civil liberties have taken a back to seat since the War on Terror has begun. The government is repeating mistakes they made in the past, including engaging in activities deemed as unconstitutional.

2:10 p.m.

Henderson Room 103

The Infiltration of Marxism into Feminism: A Comparative Analysis of Karl Marx and Nancy Hartsock

Kevin J. Mullinix

Mentor: David Freeman, Political Science - Geography

Karl Marx is one the most discussed, controversial, and often misunderstood political theorists in history. His writings have been the subject of great debate and analysis for over one hundred years. Marxist ideas and concepts have been employed by numerous governments, rebellions, and revolutions. In this particular examination of Karl Marx, his works will be analyzed in comparison to the writings of Nancy Hartsock. Hartsock employs a Marxist approach to analyzing society and primarily, the role of women in society. This valuable comparison will assist in comprehending the depth of Marx's works as it demonstrates one modern attempt of applying Marxist concepts to society.

Apeiron 2008

2:30 p.m.

Henderson Room 103

Residency Restrictions for Sexual Offenders: A Policy Based on Emotion and not Results

Kevin J. Mullinix

Mentor: Steven Cann, Political Science - Geography

In an attempt to deter sexual crimes against children, states have begun passing legislation which prohibits sexual offenders from living near schools, daycares, bus stops, and parks. By 2006, twenty-one states had passed such laws. The purpose of this study was to thoroughly examine this issue and determine whether or not residency restrictions for sexual offenders are an effective tool of deterring sexual crime. An analysis of data compiled by the Federal Bureau of Investigation in Crime in the United States (1995-2006), found no relationship between the number of arrests for sexual crimes in states with the policy and states without the policy.

2:50 p.m.

Henderson Room 103

An Analysis of the Relationship Between Federal and Confederal Political Systems

Ryan S. Robinson

Mentor: Dmitri Nizovtsev, School of Business

This paper seeks to analyze the relationship between federal and confederal systems of governance using the tools of game theory. Special attention will be paid to the tendency of confederacy to shift to other forms of governance, either dissolving or Federalizing.

3:10 p.m.

Henderson Room 103

The Basis for Secular Education

Stephen Edward Young

Mentor: David Freeman, Political Science - Geography

This paper is an examination of the origin and evolution of public schools in America. Originally intended to “domesticate the working class for participation in the civic life of the American republic,” non-secular, public education had two goals: to teach the unskilled how to read and write, and to teach morality - specifically, Christian morality. How these functions evolved came to have a profound impact on the direction of public schools in America. Considering the supposed secular nature of public education today, the questions to be asked are these: did a non-secular approach to public education function? If it did not, why? Finally, how should we as a society address the question of secular or non-secular public education today?

1:30 p.m.

Henderson Room 107

Remonstrants: The Lost Women of the Suffrage Movement

Mikale Marie Burcher

Lydia C. Parker

Mentor: Rachel Goossen, History

There have been many great struggles throughout history. Often, it seems as though only the victors are later remembered. Those who failed in their purpose are often lost to those who study history. That is why we've chosen to focus on the forgotten women of the American suffrage movement, the anti-suffragists. Our presentation includes an interactive portion with the audience. We will present first-hand materials from this time period to help our audience understand the thinking and perspectives of American women who opposed suffrage rights in the early 20th century, as well as the reactions they received from suffrage activists.

1:50 p.m.

Henderson Room 107

A Review of Research Concerned with Improving Communication Skills among Children with Autism

Ashley Dawn Ard

Mentor: Michael J. McGuire, Psychology

Autism is a challenging developmental disorder characterized by “complex problems with social interaction, language, emotion, cognition, motor, and sensory abilities” (Greenspan & Wieder, 2006, p. 3). The disorder has interested researchers as to why some children with autism have difficulty communicating. With advancements in research and the completion of interventions to increase social interaction among children with autism, a better understanding of the disorder is gradually progressing. A review of the literature indicates that performing interventions and early screenings focused on social skills of children with autism result in a decrease of inappropriate behaviors. The reviewed research also concludes that society needs to be more knowledgeable about the disorder. Increased education about the deficit will also help children with autism improve social skills.

2:10 p.m.

Henderson Room 107

Pet Ownership and Empathy

Melissa K. Eldridge

Mentor: Joanne Altman, Psychology

This study determined whether pet ownership affects empathy in humans. Previous research done in this area has often had conflicting results. A 1990 study by Robert Poresky showed that just owning a pet did not increase empathy, but that having a strong bond with a pet as a child did. However a 2000 study done by Elizabeth Paul showed that human directed empathy did not increase as Poresky had claimed, but that animal directed empathy did. This study takes a comprehensive approach and ties pet ownership and pet bonding to both human directed and animal directed empathy.

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2:30 p.m.

Henderson Room 107

^{viiE} *Unique Characteristics of Pennsylvania German in Lyndon, Kansas.*

Michael R. DeHaven

Mentor: Gabriele Lunte, Modern Languages

In May, 2001 ten families moved from Kentucky and formed a new Amish-Mennonite community near Lyndon, Kansas, which created a new Pennsylvania German speech island in Kansas. In the summer of 2007, several dialect interviews were conducted in the community. Spoken samples of the dialect were recorded using questionnaires designed for linguistic analysis. Free-speech samples of stories, songs, and picture descriptions were also collected and informants were asked about their backgrounds and their impressions of Pennsylvania German usage within the community. The samples were then analyzed to discover unique characteristics of the dialect and evidence of change or decline in the dialect. While the community itself is growing, use of the dialect among members is clearly declining. I will present data showing various characteristics of the dialect as compared to standard German, differences in usage between informants, and factors contributing to the dialects decline within the community.

2:50 p.m.

Henderson Room 107

Conforming to Established Patterns of Hopewellian Design: Analysis of Pottery Decorations from the Miller Site (14WY8).

Jeffrey R. Spencer

Mentor: Margaret Wood, Sociology - Anthropology

The Miller Site (14WY8) is a prehistoric archaeological site located on a tributary of Little Turkey Creek in Wyandotte County, Kansas. The few publications of the site conclude that it shows evidence of a distinctive set of archaeological traits that resembles the Hopewell cultures of the eastern United States approximately between 500 B.C. into the early centuries A.D. My research focuses on analyzing decorative motifs on pottery by which I was able to identify stylistic similarities between the pottery created by the occupants of the Miller site and pottery created by the Hopewell populations to the east. This research is significant because it begins to demonstrate the relationship between prehistoric people during a time of increased social and technological changes, which include the adoption of agricultural food production.

1:30 p.m.

Henderson Room 118

Investigating the Effects of High Carbon Dioxide (CO₂) on Radish Morphology and Anatomy

John M. Deeter

Mentor: Vic Landrum, Biology

Recent studies have shown that the levels of carbon dioxide (CO₂) in our atmosphere have risen to 380ppm or higher, a huge increase over the level found prior to the Industrial Revolution (~260ppm). The organisms most impacted by this increase in CO₂ are plants, which absorb CO₂ from the air and incorporate the carbons of CO₂ molecules into sugars and starches. Some projections show future CO₂ levels to be even higher. Results show that there was no statistically differences in stem length between the two treatments (p=0.07), although the alpha value was close enough to significance to indicate that, perhaps with a greater number of seedlings, significance might be achieved. Anatomical sections of roots, stems, and leaves are still being examined for anatomical differences.

1:50 p.m.

Henderson Room 118

Stupid Security

Francis E. Finley

Mentor: Dave Depue, Office, Legal, & Technology

This is a study into business rules designed to enhance computer security that have both a negative impact on the business they are intended to protect, with additional negative consequences. This research explores rules intended to make systems more secure. However once human business functions are entered into the equation, the outcomes are drastically changed from those intended.

2:10 p.m.

Henderson Room 118

Women in Radical Movements (late 1960s - early 1970s)

Annaleigh Elizabeth Curtis

Mentor: Rachel Goossen, History

While women have been politically involved for ages, there was a marked increase in radical involvement by women in movements across the United States. My presentation explores the general move to radicalize, as well as the involvement of two specific women: Bernadine Dohrn and Angela Davis.

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2:30 p.m.

Henderson Room 118

^{wf} *Genomic Analysis of Allergenic and Related Plants*

Kimberlynn S. Lockhart

Mentor: Janice Barton, Chemistry

In a continuation of Matthew Puderbaugh's research, giant ragweed, *Ambrosia trifida*, was extracted using a similar technique. The recovered DNA was subjected to randomly amplified polymorphic DNA-polymerase chain reaction (RAPD-PCR) to observe the DNA PCR profile. The resulting DNA profile will be used to compare giant ragweed to other common plants. The experiments were conducted varying the conditions for PCR reactions using the extracted DNA and six random primers. All except Primer 4 exhibited results; Primer 2 illustrated the best DNA profile compared to the other primers. Overall, my results were reproducible and consistent with Matthew Puderbaugh's. In the future, this reproducible protocol can be used to attempt distinguishing the DNA of giant ragweed from other common allergenic and non- allergenic plants.

2:50 p.m.

Henderson Room 118

^{wf} *Rhetoric or Reality?: An Analysis of Nicaraguan President Daniel Ortega's Policies*

Lacey R. Keller

Mentor: Jennifer Ball, School of Business

In 1979 a group of Nicaraguans, led by Daniel Ortega, revolted against their government. The ideas and the leader behind the revolution were often called socialist, leftist, and Marxist. Almost 30 years later, Ortega won election to the presidency; world leaders have voiced their concerns about his past as an alleged Marxist radical along with his believed allegiances to Hugo Chavez and Fidel Castro. This paper analyzes the rhetoric and policies of Ortega from the 1980s to present to determine if his views are socialist, leftist, and Marxist or if global perceptions are more shaped by the media and Ortega and disassociated with policies.

1:30 p.m.

Henderson Room 203

Where Do We Hunt for Ichabods? – A Study Using Time Series Forecasting Methods

Brandy M. Mann

Mentor: Bill Gahnstrom, Mathematics & Statistics

This project investigates trends in the numbers of graduating high school seniors in the geographic areas currently targeted by Washburn University, to see whether these trends could play a significant role in explaining recent declines in enrollment at Washburn University and perhaps assist in adjusting recruitment strategies. After locating, collecting and interpreting relevant data, I investigated forecasting models of the data through both time series forecasting and regression analysis to determine which models were appropriate, what trends they forecasted, whether these forecasts could be used to explain the decline in new student enrollment, and whether the models' forecasts could be used to help Washburn recruiters.

1:50 p.m.

Henderson Room 203

Conceal and Carry Among the States: A Before and After Study

Andrea R. Chancey

Mentor: Steve Cann, Political Science - Geography

In this study, I analyze state conceal and carry laws based on the violent and property crime rates of their respective states both before and after the passage of the law. I wanted to know if the passage of such a law actually does what it is intended to do (i.e., the reduction of crime rates). I gathered data for each state, which included the year the law was passed, the level of issuance of the permit for that law, the population, the violent crime rates before and after the passage, and the property crime rates before and after the passage. Based on this information, I was able to determine that when a state passed a conceal and carry law, the effect was a decrease in both violent crime rates and property crime rates. The type of law passed, whether it be shall issue or may issue, resulted in no real difference. Therefore, the purpose of the laws were realized, meaning that they did what they were intended to do.

2:10 p.m.

Henderson Room 203

Judicial Theater: On the Use of Narratives in Legal Proceedings

Daniel A. Usera

Mentor: David Freeman, Political Science - Geography

This paper reviews the Story Model proposed by Pennington and Hastie (1991) which demonstrates how jurors make sense of the facts presented in a legal proceeding via narratives, and how attorneys use narrative-style approaches to their advantage.

2:30 p.m.

Henderson Room 203

The Conclusion of Welsh Independence: The Reigns of Llywelyn the Great and Llywelyn the Last

Shanna M. Bruce

Mentor: Thomas Prasch, History

This historiography focuses on thirteenth century Wales and the two men who ruled the northern territory of Gwynedd: Llywelyn ap Iorwerth and his grandson, Llywelyn ap Gruffydd. Both men played a vital role in Welsh and English politics, and spent much of their lives holding off English invasions of Wales. Llywelyn ap Iorwerth earned the title Llywelyn the Great after his prowess in battle and stable reign. However, his grandson Llywelyn ap Gruffydd was the only Welsh prince ever given the title "Prince of Wales" by the English monarchy and ruled over the northern territory of Gwynedd and much of southern Wales. Ultimately, English conquest proved too strong. England's Edward I defeated the Welsh, and their Prince Llywelyn the Last, died in battle for his kingdom's sovereignty. A triumph and an end, the thirteenth century was indeed the conclusion of Welsh independence.

Apeiron 2008

2:50 p.m.

Henderson Room 203

Protestant Preachers and Enlightened Politicians: How Religion Shaped the Relationship Between Church and State at the American Founding

Jennifer L. Mills

Mentor: Alan Bearman, History

This is a historiography on the relationship between church and state in America, with special attention to how historians have, or have not, credited religion as a primary shaper of the separation clause. First, it briefly traces the field of church and state studies at the American founding. Second, it discusses the four primary men to whom historians attribute the separation of church and state in America, and how this emphasis has shaped American understanding of church-state relations. Finally, the historiography pushes for further research on religious figures who influenced the relationship between church and state at the American founding.

1:30 p.m.

Henderson Room 204

Carry A. Nation: Her Influences Upon the Nation Through Kansas

Richard E. Anderson

Mentor: Rachel Goossen, History

Known as “Mother Nation” to those she helped, Carry A. Nation worked with the Women’s Christian Temperance Union. At first, she worked within the law to close down saloons in Medicine Lodge and other communities. In June of 1900, a voice in a dream inspired her to use different tactics. The voice told her to take something in her hand, throw it at saloons and smash them. Without the vote as a means of making changes in society, many female reformers resorted to other such methods to get their message across. Nation once said, “You refused me the vote and I had to use a rock.”

1:50 p.m.

Henderson Room 204

Providing a Voice for Those Unable to Speak for Themselves: A Historiography of the Three Famous Murders within the Civil Rights Movement

Danielle J. Van Laeys

Mentor: Kerry Wynn, History

The Civil Rights Movement was a brilliant combination of social and political accomplishments, however many people involved in the Civil Rights Movement did not live to see the movement come to fruition. Historians focused their writing on people, policies, and events, yet historians generally ignore the sacrifices the common person made for the Civil Rights Movement to succeed. Historians generally overlook people like Emmett Till, the three civil rights workers killed in Mississippi, and the four girls bombed in the Birmingham church, whose deaths resulted in a change of momentum for the Civil Rights Movement. Most historians write little about these sacrifices, or ignore them completely instead choosing to focus on a different aspect of the movement.

2:10 p.m.

Henderson Room 204

Journalist or Just Another Pretty Face: Women in Journalism and the Role Appearance Plays

ReAnne R. Utemark

Mentor: Maria Raicheva-Stover, Mass Media

Women have become a force in the many branches of journalism. However, on American television broadcast news, it seems as if most female journalists are undervalued. They are dressed in clothing that is revealing, as opposed to professional like their male counterparts. Are anchorwomen supposed to be journalists or just another pretty face? The discussion and research of this concept would yield a greater understanding of American media, which plays a huge role worldwide. The media plays a leadership role in many aspects. In the age of instantaneous and constant information, media in individual countries influences and informs people outside of its own borders. The people who are the face of journalism also play a special leadership role.

2:30 p.m.

Henderson Room 204

W.E. *Thomas Paine (1737-1809) and Common Sense: A Call For Independence and Revolution*

Ryan L. Watson

Mentor: Alan Bearman, History

Author Thomas Paine (1737-1809) wrote a forty-seven page pamphlet titled *Common Sense*, which advanced the cause of the American Revolution, changed American history and crystallized a debate that had occurred in North America for nearly a decade. What became clear to Americans after reading *Common Sense* that to truly obtain their liberty, they had to move from verbal debate to a physical war against the world's best army.

2:50 p.m.

Henderson Room 204

A League of Extraordinary Gentlemen: A Comparison of Franklin and Madison Uniting Behind the American Identity

Rebecca Donne Briggs

Mentor: Alan Bearman, History

The leaders of the Revolutionary generation possessed the intelligence and dedication needed for the creation of a government that maintained independence from Great Britain. The Articles of Confederation threatened this independence because of the internal aggression among states. Benjamin Franklin and James Madison were two founding fathers that helped create the centralized government that ultimately rectified this problem. Franklin was the oldest delegate that attended the Constitutional Convention, while James Madison was one of the youngest. Although Franklin had more experience than Madison, both men contributed their knowledge and intellect to the most important document created in American history-the Constitution of the United States.

Apeiron 2008

1:30 p.m.

Henderson Room 207

Throwing a Curve: Hap Dumont and His National Baseball Congress

Brandon K. Wentz

Mentor: Alan Bearman, History

In 1931 a Wichita businessman, Raymond “Hap” Dumont, set about realizing his dream, to create a baseball league like none other. He wanted to create a league in which the players and fans both would be tested and amused by frequent changes to the most basic rules, such as which direction to run the bases, that would bring a new life to baseball. What started out as a state-wide league in 1931, slowly evolved into one of the largest amateur sporting events in the nation. His impact was not only felt by the people of Wichita, but the entire nation. In 1935 Leroy “Satchel” Paige, later a major force in both the Negro and Major Leagues played in a national championship game 12 years before Jackie Robinson would make his professional debut. Since then numerous other greats of the game including Barry Bonds and Mark McGwire have made their way through the National Baseball Conference’s annual tournaments held still in the modern era in Wichita.

1:50 p.m.

Henderson Room 207

The Inquisition of Ferdinand and Isabella

Carmen E. Henderson

Mentor: Kerry Wynn, History

This project is a historiography examining the available sources regarding the Spanish Inquisition in the second half of the 15th century, commonly referred to as the Modern Inquisition.

2:10 p.m.

Henderson Room 207

Diplomats and Dirty Little Secrets: The United States and the Dirty War in Argentina

Julia K. Bond

Mentor: Kim Morse, History

A United States Embassy employee wrote to his friends at the United States State Department saying, “Argentina is the only country in the world where you are safe in the streets, but not in your home.” Harris and many others in Buenos Aires during the military dictatorship feared disappearance at the hands of the government. The purpose of this presentation is to reconstruct the hidden story of the United States’ reasons for assisting the military dictatorship in Argentina. The United States supported the Argentine military dictatorship because they believed a true communist threat existed in the Southern Cone, the Red Scare brought about preparation for World War III, and the United States had its attention focused elsewhere and thus did not gain reliable information on Argentina.

2:30 p.m.

Henderson Room 207

with *Pequot Land Rights: A Three Hundred Forty Year Struggle*
John R. Barry

Mentor: Kerry Wynn, History

The Pequot Indian's struggle for land rights was a struggle that took three hundred forty years. The Pequot faced annihilation after the War of 1636 and took refuge with nearby tribes, such as the Narragansett Indians. Though they were placed in, what is now known as, Groton, Connecticut they would not be able to receive title to their homeland of Mashantucket, Connecticut for hundreds of years. They faced obstacles along the way, including being governed by Overseers and being at the mercy of the General Assembly for decisions of land rights.

2:50 p.m.

Henderson Room 207

Diplomacy and Domestic Interests: Tracing the Lack of a Land-Based English Empire in the Caribbean, 1492-1597

Bethany R. Mowry

Mentor: Tom Prasch, History

While England was indeed far less involved, and thus far less interesting, than Spain in the sense of empire-building in the southern Atlantic world, it is startling that rather than investigate possible reasons for this state of English affairs the majority of historians have relegated the English Caribbean presence in the 1500s to that of royally-endorsed brigands without any in-depth analysis. Englishmen competed in the Caribbean against Spanish, French and Dutch interests as well as their own countrymen, emphasizing prestige and liquid wealth over land claims to the detriment of an early southern Atlantic English imperial presence.

3:10 p.m.

Henderson Room 207

Kiss of the Spider Woman: Dirty Politics in Argentina's Dirty War

Larissa R. Potter

Mentor: Kim Morse, History

Kiss of the Spider Woman, Manuel Puig's fourth novel, serves as an autobiographical reflection of Puig's struggle with escapism, homosexuality, revolution, and idealism. Through character depictions and narrative voice, Puig examines the ramifications of sexuality and personal conviction as well as revolution and government. *Kiss of the Spider Woman* works as a graphic delineation of the lethal effects of unfettered power as well as a critical analysis of Argentina's cultural and social view of homosexuality.

Apeiron 2008

1:30 p.m.

Henderson Room 208

Saving the Spectacle: Martin and Osa Johnson's Contribution in the Age of Exploration

Jessica L. Rezac

Mentor: Tom Prasch, History

Martin and Osa Johnson, two adventurers from Kansas, explored the island of Borneo and the continent of Africa during the 1920s and 1930s. The films are the only lasting record of some of the animals and cultures existing in their natural state before European interference. Still, while the Johnson's explicit goal was to preserve images of the vanishing African continent, their journeys were full of trophy kills, zebra-skinned apparel and other behavior not common among more modern conservation-minded safari filmographers. As most historians have examined them only in light of their contribution to cinematography, the Johnsons have escaped most criticism. I take a critical approach to the contribution of Martin and Osa and argue that these two seemingly pro-animal adventurers missed their own point.

1:50 p.m.

Henderson Room 208

The Carceral Archipelago: Foucault on Power and Social Oppression

Eugene C. Stone

Mentor: Tom Prasch, History

In earlier periods of history rulers used brute strength and terror in order to maintain control of the masses. In "Discipline and Punish," Michel Foucault argues that in this age provocative methods have been replaced by more sophisticated forms of social control. While the techniques may appear more subtle, he contends their effectiveness has produced a totally administered society where, under illusions of freedom, the scope and magnitude of domination is greater than ever. This presentation will highlight Foucault's thinking on oppression as well as examine how his ideas might apply to contemporary society.

2:10^{WE} p.m.

Henderson Room 208

Truth, Lies, and Freak Weather Effects: Lyndon B. Johnson and the Tonkin Gulf Incidents

Kathryn K. Marshall

Mentor: Rachel Goossen, History

The truth of the 1964 Tonkin Gulf incident, shrouded under the mystery of classified government documents and secret closed-door meetings between Washington power brokers, remains controversial. The administration of Lyndon B. Johnson claimed that United States naval ships were on routine patrol in international waters when attacked by North Vietnamese vessels. The North Vietnamese claimed that United States military actions provoked them to attack. This paper examines recently declassified primary source documents and telephone conversations from within the Johnson Administration in the months immediately preceding the Tonkin Gulf incident.

2:30 p.m.

Henderson Room 208

In Need of Frontier: Diplomacy in the Early American Republic

Amy D. Billinger

Mentor: Kerry Wynn, History

America's modern perception of Islam developed long before the events of September 11, 2001 unleashed a massive scare of extremist behaviors. The Treaty of Tripoli signed in 1796, soon followed by war, launched a political roller coaster ride between Arab Muslims and American Christians that persisted for over two centuries. Influenced by religious fervor and the idea of manifest destiny, early Americans formed unflattering opinions of Muslim people. What most historians and analysts have failed to note is that Americans' devotion to reformed Christianity during the founding of the nation's foreign policy formed an early aversion to the Islamic religion. The Tripolitan war served as a forecast for the future of Arab-American diplomacy.

3:10 p.m.

Henderson Room 208

Angelica Kauffmann: The Muse of Neo-classical History Painting in Eighteenth Century England

Sara Louise Heckman

Mentor: Thomas Prasch, History

Angelica Kauffmann embodied the neoclassical movement in painting in eighteenth century England. She represented the neoclassical age of painting through her use of classical allegory in portraiture and her focus on Greek and Roman myths in her history paintings. She painted the portraits of English Grand Tourists while in Rome and gained patronage in England, where her neoclassical style made her famous. In Rome, Kauffmann met J.J. Winckelmann, who introduced her to the neoclassical school of painting. Kauffmann never achieved the status as a history painter that she desired while in England. As England transitioned into the nineteenth century and developed its own distinctive taste, Kauffman returned to Italy and her art was forgotten. Kauffmann was a product of the Grand Tour. She was in the right place at the right time to bring history painting to England, even though she was never fully appreciated there because of her gender.

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TIME

Henderson Room 103					
1:30 Rachael Savage	1:50 Jessica Brunken & Ryan Miller	2:10 Kevin Mullinix	2:30 Kevin Mullinix	2:50 Ryan Robinson	3:10 Stephen Young
Henderson Room 107					
1:30 Lydia Parker & Mikale Burcher	1:50 Ashley Ard	2:10 Melissa Eldridge	2:30 Michael DeHaven	2:50 Jeffrey Spencer	3:10
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1:30 John Deeter	1:50 Francis Finley	2:10 Annaleigh Curtis	2:30 Kimberly Lockhart	2:50 Lacey Keller	3:10
Henderson Room 203					
1:30 Brandy Mann	1:50 Andrea Chancey	2:10 Daniel Usera	2:30 Shanna Bruce	2:50 Jennifer Mills	3:10
Henderson Room 204					
1:30 Richard Anderson	1:50 Danielle VanLaeys	2:10 ReAnne Utemark	2:30 Ryan Watson	2:50 Rebecca Briggs	3:10
Henderson Room 207					
1:30 Brandon Wentz	1:50 Carmen Henderson	2:10 Julia Bond	2:30 John Barry	2:50 Bethany Mowry	3:10 Larissa Potter
Henderson Room 208					
1:30 Jessica Rezac	1:50 Eugene Stone	2:10 Kathryn Marshall	2:30 Amy Billinger	2:50	3:10 Sara Heckman

Poster Session, Mabee Library 3:30p.m.-5:30 p.m.

Posters will be placed in the following locations:

Gallery: West wall, Mabee Library (Posters 1-25)

Museum: South wall, near computers (Posters 26-33)

Theater: Electronic classroom, Room 206 (Posters 34-40)

Gallery

1 *Effects of Training on Cardiovascular Adaptation and Performance Predictability in Novice and Experienced Marathon Runners*

Will T. Malcolm

Mentor: Tracy Wagner, Biology

The marathon class is comprised of novice and experienced marathoners. Prior cardiovascular endurance and running experience are significant determinants in race performance and race time predictability, which will be the subject of our study. With novice runners, we hypothesize a significant increase in max Vo₂, while having a low level of predicting race times. This should occur due to the low level of initial cardiovascular endurance and little to no experience running endurance races. Conversely, we hypothesize that experienced runners will have little increase in max Vo₂ due to a greater level of cardiovascular endurance prior to training. Additionally, experienced marathon runners will have a high level of predicting their race times due to greater marathon racing experience.

Gallery

2 *Media and Men: Do Images of Supermodels Effect Perceived Female Partner*

Attractiveness?

Lauren Albin

Mentor: Pam MacDonald, Psychology

The purpose of this study was to determine whether or not the media has an effect on how males view their female partners' attractiveness. Catalogs featuring either scantily-clad, beautiful women (experimental group) or no women at all (control group) were viewed, and questionnaires were completed concerning perceived partner attractiveness. Although there were some differences between the groups based on catalog type, the prediction that males in the experimental group would rate their female partners as less attractive as compared to the control group was not supported. That is, the differences between the groups was not statistically significant.

Apeiron 2008

Gallery

3 *Patrol Officer Call for Service Workload: An Urban and Small Town Comparison*

via **Trisha N. Rhodes**

Mentor: Rich Johnson, Criminal Justice - Military Science

Although small town agencies make up the majority of police departments in the USA, there is a surprising lack of information regarding how the workloads of small town and urban police officers differ. The widely held assumption that urban officers deal with higher workloads than small town officers has never been empirically tested. The present study involved a direct comparison of the average number of calls for service handled per patrol car per shift in three city and three small town municipal law enforcement agencies during a two-week period in 2006. The findings indicated that there was considerable variation across all six communities; however, the average number of calls handled by the urban officers was still significantly larger than the average number of calls handled by the small town officers.

Gallery

4 *An Assessment of Registered Nurses' Knowledge of Pressure Ulcer Prevention and Treatment*

* **Shirley M. Waugh**

* **Diane C. Smith**

Mentor: Marian Jamison, School of Nursing

The primary purpose of this study was to assess registered nurses' knowledge of pressure ulcer risk and prevention, pressure ulcer staging, and wound description. The secondary purpose of this study was to identify registered nurses' perceived barriers to providing effective pressure ulcer prevention and treatment. The Pieper Pressure Ulcer Knowledge Test (PPUKT) was used in this study. The mean test score for the total sample (N = 96) was 72.8% (SD = 8.5%). Nurses' knowledge was significantly higher when exposed to educational materials. There was no relationship between test scores and age, experience, or nursing degree. Common perceived barriers included: patient too heavy, not enough time, and not enough staff.

Gallery

5 *An Ab Initio Investigation of the Role of Lewis Base in the Borane Reduction of Nitriles*

Caitlin E. Givens

Mentor: Shaun Schmidt, Chemistry

An ab initio computational investigation of the mechanism for the reduction of a nitrile with Lewis base adducts of BH_3 has been undertaken using Gaussian 03. A selection of Lewis bases containing O, N, S, and P donor atoms were used to form adducts with BH_3 . Comparison of the relative energies of these adducts suggests that dimethylsulfide may be a better candidate for the Lewis base catalyst/adduct. These computational results need confirmation through experiment. Based on previous experimental results in our lab, the transition states formed during the reduction of the nitrile with the $\text{THF} \cdot \text{BH}_3$ adduct were also calculated. There are multiple transition states for the reaction and more calculations and experiments are required.

Gallery

6 *Internet Addiction: Does it Affect our Everyday Social Interactions?*

Renaë W. Latimer

Mentor: Laura Stephenson, Psychology

The Internet is widely used all over the world for reasons ranging from talking and interacting with others to shopping and everything in between. For many people, the Internet has become an essential part of daily life. The purpose of the present study is to test the hypothesis that Internet addiction is correlated with face-to-face, everyday social deficits and those who are addicted to the Internet will show poor face-to-face social skills.

Gallery

7 *The Influence of Gamma-Ray Bursts on Nitrate Concentrations in Ponds and the Impact on Amphibian Populations*

Michelle DeAun Honeyman

Mentor: Brian Thomas, Physics - Astronomy - Geology - Engineering

As diversity in amphibian species declines, the search for causes has intensified. Work in this area has shown that amphibians are especially susceptible to a combination of UVB radiation and increased nitrate concentrations. Gamma-ray bursts have been suggested as a possible danger through destruction of the ozone layer and subsequent increase in UVB, followed by deposition of nitrate. In this study, we converted predicted nitrate depositions to concentration values, utilizing data from the New York State Department of Environmental Conservation web site. This was done by taking measured concentration and deposition values and determining a conversion factor. Twenty-seven sites in the New York State area were sampled over a ten year period. Our results show that the increase in nitrate concentration in these bodies of water following a gamma-ray burst would not be sufficient to cause a serious additional stress on amphibian populations.

Gallery

8 *Allele-Specific PCR Detection of K-type rDNA in Misidentified USDA Accessions of Wheatgrass*

Kiley A. Nusbaum & Erin N. Hevel

Mentor: Matt Arterburn, Biology

Previous research in our lab has demonstrated that the polyploid wheatgrass species *Thinopyrum intermedium* (intermediate wheatgrass) and *Th. ponticum* (Russian wheatgrass) contain rDNA clusters with a distinct oligonucleotide polymorphism in the internal transcribed spacer (ITS) that distinguishes them from other wheatgrasses. This polymorphism has sequence similarity to the Syrian species *Crithopsis delileana* (false barley). We designed DNA primers to anneal specifically with this polymorphic sequence and optimized a PCR assay to detect this “K-type” (named for the K genome of *Crithopsis*) rDNA in wheatgrass accessions from USDA seed banks. We have successfully identified a number of collected quackgrass and tall wheatgrass samples that test positive for this assay and likely represent accessions of tall or Russian wheatgrass that were misidentified on the basis of morphology.

Apeiron 2008

Gallery

9 *The Things People Have*

WTE **Sean T. Florez**

Mentor: Michael Russell, Psychology

“The Things People Have” is essentially research designed to study Washburn faculty members desks and correlate what they have on them with who they are and what field they are in. Thirty Washburn University faculty members desks were video taped and the statistics were calculated of what is on them. The items were then grouped either as being an emotional item or a functional item. After comparing the items of each faculty member with one another, some similarities and some discrepancies were found.

Gallery

10 *The Effects of Chocolate and Cheese on Mood*

WTE **Valerie Grose**

Mentor: Joanne Altman, Psychology

Sweet and fatty foods have been shown to influence mood but it is unclear which specific aspect or ingredient is the primary mechanism. Using white, milk, dark chocolate and cheese, this study explored the effects of sweet taste, carbohydrates, methylxanthines, and fat to determine which characteristic primarily affects mood. Data revealed that fat decreased negative affect and dark chocolate increased negative affect.

Gallery

11 *The Effect of Sensation Seeking and Early Challenge in High School on College*

WTE *Student Experience*

Lydia C. Parker

Mentor: Joanne Altman, Psychology

The role that academic challenge may play in directing the sensation-seeking behavior of high and low sensation seekers was investigated. The participants completed four surveys pertaining to sensation seeking, time management, and college behaviors. This study suggested that high sensation seekers adjusted better to college when they were challenged early on in school and low sensation seekers were better adjusted when they were not challenged as much early on in school.

Gallery

12 *The Night Sky of Winter in the Celestial Sphere of the Northern Hemisphere: Comparisons of Images Through Methods of Observing and Photographing*
Richard E. Anderson

Mentor: Brian Thomas, Physics - Astronomy - Geology - Engineering

Do stars really twinkle? Why can't we see the moon clearly on some nights even though there are no clouds? Why do some comets have tails while others appear not to have one? Through an understanding of Astronomy; Solar System and Cosmology, and with Astro-photography answers to these questions may be found. With my presentation of photographs, I will display the methods I used to capture images of a comet, two galaxies, the sun, the moon, and stars. Photographing for my images occurred through both a film and digital media. A comparison of the results of both methods will be shown. Basic astrophotography and the accompanying difficulties and triumphs will be displayed and discussed.

Gallery

13 **Herpes Simplex Virus Type I UL34 Protein Interactions Critical to Primary Envelopment**
Tyler Drew Goetz

Mentor: Susan Bjerke, Biology

Herpes Simplex Virus Type 1 UL34 protein is required for mediating primary envelopment of viral capsids in infected host cells. UL34 complexes with viral proteins and interacts with cellular proteins to alter the nuclear lamina. To delineate between protein interactions non-specific to primary envelopment and those that mediate, it was necessary to utilize charged cluster mutants of the HSV-I UL34 protein that did not complement. These mutants were cloned and the protein products were expressed and purified with a 6-His tag. Pull-down interactions were performed between the wild type and mutant UL34 and a Hep2 cellular lysate. Yeast-2-hybrids were used to confirm the UL34-cellular protein interactions in vivo in yeast cells. UL34 will be screened against a HSV-I library using a Yeast-2-hybrid system to look for protein interactions that are important to viral egress. These studies might lead to drug treatments that could block protein interactions and prevent the spread of a herpes.

Gallery

14 *Emotional and Behavioral Disturbances Among Infants Aged 0-3 Who Sought Treatment at a Psychological Clinic*

with

Amber Whitney

Mentor: Pam MacDonald, Psychology

The purpose of this study was to determine if different parenting styles are related to emotional and behavioral disturbances in infants. The study also assessed gender difference. The results indicate that infants with underinvolved parents or angry, rejecting, and controlling parents exhibit more emotional and behavioral disturbances than infants without underinvolved or angry, rejecting, and controlling parents. Infants with a lack of structure and routine also exhibit more emotional and behavioral disturbances than infants with structure and routine. However, there is no gender difference.

Apeiron 2008

Gallery

15 *Stress, Eating Behavior, and Happiness*

WTE **Megan D. Casey**

Mentor: Joanne D. Altman, Psychology

There is much research offering insight as to why people employ restrictive eating behaviors; for instance anxiety and stress have been linked to restrained eating. However, the existing body of research fails to address the potential positive emotional outcomes restrainers may experience as a result of their selective eating behavior. The present study investigated the relationship between restrained eating, happiness, and coping with stress during a stress time versus non-stress time. During stress, the restrained eaters showed an increase in happiness whereas the non-restrainers showed a decrease in happiness. In addition, restrainers coped better with stress than their non-restrained counterparts.

Gallery

16 *Effect of the Washburn Transformational Experience on Self-Actualization*

WTE **Tiffany D. Strohmeyer**

Mentor: Joanne Altman, Psychology

When Abraham Maslow developed his hierarchy of human needs, he confined the fulfillment of the need for self-actualization to older adults. This study attempts to challenge the belief that young adults are incapable of achieving self-actualization, by evaluating the effect that the Washburn Transformational Experience (WTE) has on college students' levels of self-actualization. Students who have completed at least one WTE were found to have significantly higher levels of self-actualization than students who have not completed a WTE. The data suggest that young adults do have the capacity for self-actualization and offer additional support for the value of the WTE graduation requirement.

Gallery

17 *Polyphenolic Relationship Analysis*

WTE **Subin Chun**

Mentor: Stephen Angel, Chemistry

The optimization of experimental procedures for determining polyphenolic concentration in food is presented, such as, reaction time, temperature and reagent concentration. Also there are some sources that say the indicator does not react with caffeine or theobromine (ingredient in cocoa); however, preliminary results using current techniques indicated that these molecules do indeed react with the indicator to produce false positive tests for polyphenols.

Gallery

18 *The Effect of Romantic Relationships on Students' Adjustment to College*

wfE **Brittany E. Eakes**

Mentor: Joanne Altman, Psychology

Research shows that romantic relationships affect an individual's emotional well-being. However, only one study looked at their effects on college adjustment, but it was only a qualitative analysis. The present study empirically tested the effect of romantic relationship of men and women on college satisfaction within the first year. Results found that women adjusted less well to college when in a serious relationship than men. Women were better adjusted to college than when not in a serious relationship.

Gallery

19 *Personality Characteristics of Dog Owners*

wfE **Kimberly Anne Goodman**

Mentor: Joanne Altman, Psychology

Pet-owners show different personality characteristics from non-pet owners, and "dog people" differ from "cat people." However, dog breeds vary greatly, and their owners may too. This study investigated personality characteristics of dog owners. A series of one factor between group ANOVAS were run on commitment, impact, attachment, and five personality factors. Three significant main effects for sex for commitment were found. Women were more committed to, and impacted by, their pets than men were. In addition, owners of medium size dogs were more agreeable than owners of large dogs. These results show there are some differences among owners of dogs.

Gallery

20 *Analysis of Incarceration Sentences Based on the Gender of the Criminal*

wfE **Amanda Marlene King**

Mentor: Pamelyn MacDonald, Psychology

The media focuses on racial disparity amongst incarceration sentences. However, research suggests no such disparity exists. There is evidence that gender affects the length of incarceration sentences. This study is a replica of a previous study that used vignettes. There were two vignettes that discussed two crimes. The results showed that participants gave the woman a less severe sentence than the man. The two crimes in which the offenders were charged with were the same, but the circumstances surrounding the crime were different. In an effort to determine if the circumstances determined the harsher incarceration sentence for the male offender, the original two vignettes were replicated, changing only the gender. Results are expected to show more leniency for the woman offender still, but results are still pending.

Apeiron 2008

Gallery

21 *Protein Profile of Giant Ragweed Pollen*

Scott N. Ashley

Mentor: Janice Barton, Chemistry

Hay fever, which can be caused by common and giant ragweed, is an annoyance to many in America. This research is a continuation of research led by Dr. Barton to find the factors that differentiate ragweed (*Ambrosia trifida* and *Ambrosia Artemisiifolia*) from other plant species by using comparative analysis of the protein profiles from the species of plants. To extract the pollen a solution containing 5 M urea and 2 M thiourea and tris base was used. The protein profile was determined by running 2 dimensional gel electrophoresis. Analysis was done with ImageMaster software. Each gel was also compared to the protein profile of giant ragweed pollen. The project described was supported by the NIH Grant Number P20 RR016475 from the INBRE Program of the National Center for Research Resources, and its contents are solely the responsibility of the authors and do not necessarily represent the official views of NIH.

Gallery

22 *Does Your Dog Act Like You?: Owner and Dog Personalities*

vii **Gloria J. Starkey**

Mentor: Joanne Altman, Psychology

This study investigated whether personality of a dog owner and her dog match, and if a match is based on the size or breed of the dog. This study also considered length of ownership of the pet to answer the question of whether owners choose pets because of their existing personality, or if the pets' personality simply conforms to their owners over time. Participant dog owners were administered a personality test and completed one on their dogs. Pearson correlations showed some correspondence between dogs and their owners based on dog size and breed.

Gallery

23 *Alexander the Great: Genuinely Great or Absolutely Lucky?*

Daniel Patrick McNulty

Mentor: Dmitri Nizovtsev, School of Business

By using game-theoretic methods we investigate the rationality of Alexander's strategic decisions and determine whether the success of his conquest can be attributed to either his military prowess or pure luck. We gather the needed information to construct games and solve them to determine probable outcomes. The solutions we derive are then compared to the actual decisions and conclusions are made.

Gallery

24 *Anxiety and Family Functioning*

with **Cheri L. Stortz**

Mentor: Cindy Turk, Psychology

Little research has been done that focuses on the family functioning of individuals who have social anxiety. This study compared persons with social anxiety to persons without social anxiety on their family functioning level. Significance was reported when looking at the levels of communication and general functioning of the family.

Gallery

25 *Behold the Handmaid of the Lord: The Representation of the Virgin of the Annunciation in Renaissance Manuscript Illuminations*

McKinley E. Rainen

Mentor: Reinhild Janzen, Art

My Apeiron submission will explore manuscript illuminations created during the Renaissance between 1470 and 1550. I will focus on the similarities and differences between manuscripts created in northern Europe and those produced in Italy. In particular, my interest is in the representation of the Virgin of the Annunciation in illuminated manuscripts. Specific questions I will be asking include: How is Mary made beautiful and why? Where is the Virgin situated, what is she shown doing at the moment the angel Gabriel appears? What is significant about the overall structure of the composition? How and why are styles of representation and iconography in northern and southern illuminations different? My project seeks understanding of how this New Testament event was interpreted both south and north of the Alps.

Museum

26 *The Effect of Incentives on Memory*

with **Shanna D.L. Callahan**

Mentor: Pam MacDonald, Psychology

Participants were asked to watch a short video and then fill out a questionnaire that tested their recognition and recall memory for information contained in the video. The incentive (experimental) group was offered a piece of candy for each correct answer prior to watching the video as motivation to answer questions correctly, while the control group did not receive an incentive. Results indicated that the motivator did work, with experimental participants remembering more information (both recall and recognition) from the video than the control group. Recognition memory scores were higher than recall memory scores for both groups.

Apeiron 2008

Museum

27 *Start Young: Learning Leadership*

with **Lisa M. Fahey**

Mentor: Gary Forbach, Psychology

I will be sharing my experiences and the knowledge gained from facilitating a roundtable discussion at the Women as Global Leaders conference in Dubai in March of 2008.

Museum

28 *Improving Pain Assessment Documentation at a Local Long Term Care Facility*

Amanda E. Bhattachan

Shannon M. Porter

Mentor: Cynthia Hornberger, Allied Health

Careful management and treatment of acute or chronic pain is important and is a basic human right (Ebersole, Hess, Touhy & Jett, 2005). Furthermore, chronic pain in the elderly, can result in a huge number of complications resulting in decreased quality of life for the suffering individuals. To summarize, inadequate pain management leads to the “terrible triad” of suffering, sleeplessness, and sadness. Older adults are particularly vulnerable to chronic pain (Nichols, 2003). Forms utilized to document pain data, and the knowledge of staff members is sometimes limited, together leading to poor treatment outcomes. Forms will be updated per evidence-based practice, and a Procedures document will be written as well as a thirty minute educational presentation toward staff needs will be conducted. Outcomes which will be measured are predicted as follows: a decreased amount of pain medications given on an ‘as needed’ basis, a shorter amount of time required to complete a Medical re-required form upon each individual requiring pain medication, 100% compliance by staff in attendance of training, and 100% compliance in staff utilizing the new forms, all by one month following initiation of the project.

Museum

29 *Where Math Meets Music*

Tamela K. Bolen

Mentor: Sarah Cook, Mathematics & Statistics

Most people know that there are many connections between math and music but do not know how deep these connections are. In this presentation we will discuss basic music theory, application of this theory, graphs of sound waves, and Fourier Theory in music. The culmination of these connections will be seen in the reconstruction of sound waves using a discrete set of data points with Fourier Theory. This presentation will explore the vast array of mathematics involved in music.

Museum

30 *Detecting Sex of Heterosexual and Homosexual Men and Women Using a Point Light*

wf: *Movement Display*

Trent A. Wilkerson

Mentor: Joanne Altman, Psychology

Research shows sex can be determined by body movement. This study investigated whether identification of sex is influenced by homosexuality. Participants rated the sex of heterosexual and homosexual volunteers after watching them move in a point light display. The data will be discussed in terms of biological determinants of homosexuality. Results show that homosexual females were rated in the expected direction while homosexual males were not. This makes it hard to parse biology from culture. The results partially support a biological basis for sexual orientation but not completely.

Museum

31 *The Effect of Captive Environment Alterations on Asian Small-Clawed River Otters* (*Aonyx cinerea*)

wf:

Kristina Sheets

Mentor: Joanne Altman, Psychology

In this study two Asian small-clawed river otters (*Aonyx cinerea*) were monitored through means of naturalistic observation conducted for ten minute sessions. Otters' behaviors were recorded at thirty sec intervals. Thirteen behaviors were recorded and grouped into four categories (active, inactive, social, not visible). Different enrichments (plants, an elevated platform, straw) were introduced to the otter's captive environment. Results showed that inactive behaviors decreased in the presence of manipulatable enrichment (straw) vs visual enrichment (plants) and the male and female otters spent unequal amounts of time in different areas of the exhibit.

Museum

32 *Psychosocial Group: An Evaluation of Adolescents*

wf:

Travis M. Freed

Mentor: Pam Macdonald, Psychology

The purpose of this study was to examine the effects and progress of children aged 6-18 whom were enrolled in psychosocial groups at a Community Mental Health Center. Participants were measured on a weekly basis, using a Likert scale (1-5), by Mental Health Providers on five separate domains: Interpersonal Relationships, Health, Social Skills, Leisure Time, and Problem Solving. Results were analyzed at ten week intervals. Statistical significance was found for children attending group 21-30 weeks and 51 or more weeks in the areas of Problem Solving, Social, Skills, and Interpersonal Relationships. These findings show the effectiveness of the groups in question and suggest a specific time frame for the optimal performance of those enrolled.

Apeiron 2008

Theater

33 *Medication Safety in the Post Anesthesia Care Unit*

Lisa M. Ratliff

Mentor: Lori Edwards, School of Nursing

A research study was conducted at a local hospital on medication administration with the use of syringes, knowledge of hospital policy, and common practices and concerns for safety in the Post Anesthesia Care Unit.

Theater

34 *Initial Investigation into Azamacrocyclic Ring Closing Metathesis*

^{WE}

Christopher Woolaway

Mentor: Shaun E. Schmidt, Chemistry

Macrocyclic complexes have been used for many years as imaging agents and in radiotherapy. These macrocycles serve as a “host” to carry the metal ion “guest” through the body. [46]Adamanzane is envisioned to be an alternative to the macrocycles currently used due to the advantages of its chemical inertness and the total encapsulation of the metal ion. The total encapsulation of the metal ion should lessen the possibility of (potentially damaging) metal ion dissociation. The goal of this project is to continue manipulating different variables (such as solvents, temperatures, concentrations, catalysts, etc.) involved in the reaction in order to produce higher and more consistent yields. Once a high yielding procedure is found, the procedure can be applied to a range of macrocyclic ring sizes.

Theater

35 *Improving Pain Assessment Documentation at a Local Long Term Care Facility*

Anh Nguyen

Mentor: Cynthia Hornberger, Allied Health

Careful management and treatment of acute or chronic pain is important and is a basic human right (Ebersole, Hess, Touhy & Jett, 2005). Furthermore, chronic pain in the elderly, can result in a huge number of complications resulting in decreased quality of life for the suffering individuals. To summarize, inadequate pain management leads to the “terrible triad” of suffering, sleeplessness, and sadness. Older adults are particularly vulnerable to chronic pain (Nichols, 2003). Forms utilized to document pain data, and the knowledge of staff members is sometimes limited, together leading to poor treatment outcomes. Forms will be updated per evidence-based practice, and a Procedures document will be written as well as a thirty minute educational presentation toward staff needs will be conducted. Outcomes which will be measured are predicted as follows: a decreased amount of pain medications given on an ‘as needed’ basis, a shorter amount of time required to complete a Medication re-required form upon each individual requiring pain medication, 100 percent compliance by staff in attendance of training, and 100 percent compliance in staff utilizing the new forms, all by one month following initiation of the project.

Theater

36 *Infrared Spectroscopy of Triphenylphosphonium Bromide and 4-Bromobenzaldehyde* w/ *Reaction Kinetics in KBr*

Jeff Rickard

Mentor: Stephen Angel, Chemistry

Reaction kinetics of organics solid-solid reactions were investigated in the reaction of triphenylphosphorane and 4-bromobenzaldehyde. The reactants were milled and pressed in a KBr pellet and the absorption spectra was measured using an IR-spectrometer. The effect of initial concentrations was investigated to determine the order of the reaction. A time dependent rate constant, implying diffusion-limiting conditions, was taken into account when producing the final mathematical model of the reaction.

Theater

37 *Flyover of the 3D Mandelbrot Set*

Michael Van Doren

Mentor: Bruce Mechtly, Computer Information Sciences

The Mandelbrot set is a popular fractal plotted on a 2D complex plane, where the colors are based on the results from a fairly simple equation. We have taken the number usually used to assign colors, and have extended it to also assign height in a 3D environment. To do this, we began by using rasters to identify entire regions where the number/color does not change. We then had to draw these regions sloping 'downhill', so that they would connect vertically with the regions located right next to them. Because of the abnormal shape of many of these regions and how computers draw in 3D, we needed to split each region into many individual triangles, involving a series of calculations to get distances, heights, and normal vectors correct. The end result is a 3D environment which we can move through in real-time, creating fantastic 3D images.

Theater

38 *The Effects of Listening to Classical and Heavy Metal Music on Mood: Does Personality* w/ *Make a Difference?*

Jhessika A. Jordan-Mena

Mentor: Pamelyn M. MacDonald, Psychology

Individual's preferences of music are often based on personality and identification. Music has been show to have a psychological impact on emotional states. This study looked at how classical and heavy metal music affects mood with pre and post tests. Correlations between personality, musical taste and moods were also examined.

Apeiron 2008

Theater

39 *Three Dimensional Modeling and Animation of the Parthenon of Greece*

Stephanie L. Woodman

Mentor: Azyz Sharafy, Art

This is a presentation of rendered three dimensional animation that was made in the computer program Lightwave. Sounds/music were created in Finale software and special effects were made in Motion software. The modeled architecture that is the focus of the animation is of the Parthenon of Greece. It is meant to be a representation of it and not a detail by detail model of it. The camera work serves as a tour through the modeled environment.

Theater

40 *Animated Walkthrough of 3D Castle*

Betsy L. Irvin

Mentor: Azyz Sharafy, Art

The project is a 3D Digital Animation based on modeling and camera walkthrough. It was executed in Lightwave 3D and then rendered as a Quicktime movie. The soundtrack was created in Soundtrack Pro. Textures and images were added to give it a realistic look. The research was based on understanding the architectural properties of a castle and the use of translucent images for a stained glass look. Fire was created by Motions2 special effects software. My research was also to explore modeling concepts, understanding polygons in 3D objects and use of lights, camera, and motion path to create the animation. In conclusion, my research included understanding four software and achieving realism in a virtual environment.

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