Proceedings of the 2005 MARCUS Conference
Saturday October 8, 2005

Session I

9:30
Benjamin T. McClure: Virginia Military Institute

Practicing Literature: Chivalric Origins of the Southern Gentleman
The literature of Arthurian Legend, and its picture of chivalry, has played a large role in our culture since it originated almost one thousand years ago. It has helped to shape history, values, ethics, popular ideals, etc. Even in the late 20th Century, the effects can still be clearly seen, particularly in the American South, for example, in VMI's "Code of Gentlemen." However, these literary pictures of chivalry do not mirror the historical realities and therefore present the question, what is our perception of chivalry actually based on? The idea of the Southern Gentleman is based on the medieval knight, however, not on the historical knight, not even on the medieval literary knight, but on 19th-century interpretations and often misreadings of Arthurian Romance.

9:45
Elyse Poinsett: James Madison University

Six-Feet Over: Victorian Grave Monuments 1850-1900
Victorian cemeteries are important cultural museums that display artifacts in the form of monuments. The monuments were designed, carved, and placed an intriguing combination of societal and personal contexts. They succeed, even today, in conveying messages to observers. It is possible to trace ideas about mourning and mortality using these physical manifestations as material evidence. The driving force of my research is the quest of a particular gravestone carver in Rockingham County during the 19th century. Therefore, an amateur field-study of mid to late 19th century monuments at Woodbine Cemetery, in Harrisonburg, Virginia, is used as a focal point for the presentation.

10:00
Michael Kniss: Eastern Mennonite University

Following the "Old War-Horse": The Longstreet Legacy in the North
Over the past three decades Civil War historians have reevaluated the life of General James Longstreet, who spent his later years under constant attack by Southern writers who criticized both his military career and his post-war political decision to join the Republican Party. Recent scholarship has revealed this systematic slandering of Longstreet as a desperate attempt by the Southern literary elite to seek a scapegoat for the demise of the Confederacy. Current revisionist studies focus on the Southern post-war mindset, largely disregarding the North's response to Longstreet. This study will do the opposite, focusing instead on the complex political milieu of the North during Reconstruction and how Republican operatives bolstered Longstreet's reputation and exploited his political beliefs to support a Northern policy agenda.

10:15
Lauren Wallace: James Madison University

War in the Valley: An Analysis of the Diaries of Mary Kelly and Lucy Buck
A thorough analysis of the Civil War diaries of Mary Kelly and Lucy Buck. The personal accounts of women, both of whom lived in Virginia's Shenandoah Valley during the Civil War, strongly reflect both the military aspects of the war that they witnessed from the home front and details about the changes they experienced in their own households and communities. They also reflect the views that women held about the war and the ways in which they dealt with its often unpleasant effects.

Session II

9:30
Ashley Figueiredo: Sweet Briar College
Co-author: John J. Beck

Extraction, Fractionation, and Bioactivity Testing of Bidens Bipinnata
The extraction, fractionation, and bioactivity testing of the ethyl acetate and methanol layers of Bidens bipinnata (family Asteraceae) are described. The semi-polar and polar extracts of ground aerial parts of B. bipinnata were separated via liquid-liquid partitioning, vacuum liquid chromatography (VLC), and flash column chromatography (FCC). The bioactivity of the extracted fractions was tested against Bacillus subtilis and Staphylococcus aureus, with moderate to large zones of inhibition recorded in three fractions of the ethyl acetate layer.

9:45
Farzana Sekander: Sweet Briar College
Co-author: John J. Beck

Extraction, Isolation and Characterization of Bioactive Components of Cleome Spinosa
Cleome spinosa, commonly known as the Spiderflower and from the family Capparaceae, is a tropical plant widely cultivated for many different reasons. Spiderflower is an ornamental plant whose genera is noted for its many medical uses. The research reported herein focuses on the antibacterial properties of Cleome spinosa against gram-positive bacteria. The goal of the investigation was to confirm the plant's bioactive properties and isolate its bioactive components. The plant extracts were subjected to VLC, FCC, Sephadex, and HPLC fractionation. Various fractions showed bioactivity against one gram positive microbe, and one compound was purified and isolated. Characterization of the compound is currently being conducted. The report confirms that bioactive properties were exhibited by Cleome spinosa. It also reports on the observation of slightly enhanced bioactivity when the plant extracts combined with Penicillin were tested.

10:00
Brittany Lambert: Sweet Briar College

The Mechanisms of Jaw Protrusion: A Kinematic Study of the Creek Chub
The Creek Chub, Semotilus atromaculatus, is a minnow that feeds opportunistically and occurs in small freshwater streams across the eastern United States. Creek Chubs are of particular interest in this study because they have independently evolved a highly protrusible upper jaw. This study takes natural prey (crickets, fruit flies and small fish) into consideration and uses high-speed film to record the sequence of movements of the jaws and various skull bones. Analysis of the timing and extent to which these cranial structures move will allow to comparison to other species for which kinematic values are known. Knowing the strike parameters for the Creek Chub will provide the information needed to determine how this large, species-rich group fits in evolutionarily and functionally to previously studied species.

10:15
Jessica Parker: Christopher Newport University
Co-author: Dr. Nicole Guajardo

Examining the Degree to which Physical Counterfactual Thinking and Social Counterfactual Thinking Account for Theory of Mind Performance
Past research has examined the extent to which counterfactual thinking accounts for variability in theory of mind performance (e.g., German & Nichols, 2003; Guajardo & Turley-Ames, 2004; Riggs, Peterson, Robinson, & Mitchell, 1999). Results suggest that the relationship between counterfactual thinking and theory of mind understanding depends not only on theory of mind development, but also the nature of the counterfactual task. The present study explored whether social counterfactuals account for more variance in theory of mind performance than do physical counterfactuals. Eighty-one 3- to 5-year-old children completed language, physical counterfactual, social counterfactual, and theory of mind tasks. Children generated similar numbers of physical and social counterfactuals, however, only the generation of physical counterfactuals accounted for unique variance in theory of mind performance.

Session III

9:30
Richard J. Rosendahl: Hampden-Sydney College
Co-author: Jeremy T. Schwartz

A Winning Combination? An Empirical Investigation of Collegiate Athletics
We analyze the relationship between athletic success given by winning percentage in a particular sport and several factors including endowment, tuition, graduation rates, performance in other major sports, and prior year's performance. In this preliminary study, we collect data over a five-year span from three conferences: the Atlantic Coast Conference (ACC), the Atlantic 10 Conference (A-10), and the Old Dominion Athletic Conference (ODAC). Graduation rates for men's basketball players and male athlete overall are significantly lower than those of their female counterparts; interestingly, graduation rates for all students are not statistically different when separated by gender. The best predictor for athletic success is the prior year's performance in that sport.

9:45
Brittany Forgrove: Neumann College

Modern Day Ballparks: Is It More than Just Baseball?
Around the country many baseball teams, including minor league and major league, have had a new stadium built with the past ten years. New ballparks attract fans because of the new amenities that are now available at these new ballparks, rather than appreciation of a good baseball game. Technology is becoming more and more important to ballparks. Carnival like activities and extravaganzas along with promotions with these new ballparks are what keep the fans coming. The baseball game seems to be the side show to all the activities that go on at the ballpark.

10:00
Alicia Cavalli: Neumann College

Family and Marriage: The Decline of American Tradition
Whatever happened to the typical American family traditions? This presentation explains the numerous causes for the rejection of the family life. In comparing the 1950s to the 2000s it is evident that there is a decline in positive American traditions. Through research, I have determined some possible causes for the decline of the family and marriage tradition.

10:15
Mary Ansley Sutton: James Madison University

From Birth to Giving Birth: Changing Conceptions and the Strength of the Family Bond
Scholars have debated the existence of parental indifference during the centuries that comprised the Medieval and Early Modern periods in England. Historians have cited practices such as wet nursing and swaddling to prove that parents regarded their children as property. When examined in context, however, these customs are apparent acts of love. This paper utilizes a variety of primary sources, including diaries and letters, as well as secondary sources to argue that there was a gradual transformation from outward parental indifference to overt affection.

Session IV

9:30
Kimberly A. Wilson: Sweet Briar College
Co-authors: Jay F. Piccirillo, M.D, Anna Vlahiotis, M.A.

Comparison of Four Co-Morbidity Staging Systems
Comorbidity refers to other illnesses, diseases, or conditions, which a patient has that are not related to the index disease. Comorbidities can impact diagnosis, prognosis, therapy, and quality of care assessment. There are a variety of staging system instruments available to measure the type and severity of comorbid ailments. In this research, the performance of four types of comorbidity staging systems: ACE-27, Charlson Comorbidity Index, Comorbidity Count, and Study-Specific Weights were compared using a large cohort of adult cancer patients. Statistical analyses were

performed on the data. While all systems performed well, Study-Specific Weights had the strongest correlation to projected survival.

9:45
Graham Bodie: Hampden-Sydney College

Characterization of Osteoprotegerin and Rank Ligand in Melanoma Cells
RANK ligand, or Receptor Activator of Nuclear Factor, plays a regulatory role in the process of bone cell creation, along with Osteoprotegerin (OPG). Four tumor cell lines from isolated melanomas were established and analyzed for OPG gene expression, RANK-L protein production, and for the presence of membrane-bound TRAIL receptors. Research was carried out jointly between laboratories at the University of Virginia and Hampden-Sydney College. Results are pending on microarray analysis; however, it was discovered that each of the cell lines is capable of producing the soluble RANK ligand. Production of the compound may require stimulus in certain cell lines from the addition of cytokines.

10:00
Suzanne Harvey: Sweet Briar College
Co-authors: Jaime L. Heimbegner, John J. Beck

Enhanced Antibacterial Activity of Lemongrass (Cymbopogon Flexuosus) Extracts and Components when Combined with the Known Antibiotics Ampicillin and Penicillin
Lemongrass, Cymbopogon flexuosus (family Gramineae), is a common medicinal herb used for a variety of ailments. Extracts from the hexanes layer and pure components from Lemongrass exhibited enhanced antibacterial activity against the microbes Bacillus subtilis, Staphylococcus aureus, and Klebsiella pneumoniae, when combined with the known antibiotics ampicillin and penicillin. The commercially available compounds citral, R-citronellal, S-citronellal, geraniol, R-limonene, S-limonene, and myrcene were tested for background activity and bioactivity when combined with the antibiotics.

10:15
Daniel Kim: University Of Virginia
Co-authors: Yong Sun Lee, Anindya Dutta

The Case for Sirna over Morpholino Mediated Depletion of Micrornas
MicroRNAs are short (~22 nucleotides) sequences of non-coding RNA shown to have regulatory functions in cell development1. Effective knockdown strategies are critical to understanding the function of these microRNAs. In our lab, we have already demonstrated that mature human microRNA miR-125b is a vital factor in the proliferation of differentiated prostate cancer (PC-3) cells through its depletion using small interfering RNA designed against its stem-loop precursor2. Here, we assess the advantage of our siRNA knockdown strategy by comparison to another antisense oligonucletide technology used for gene silencing: morpholinos3. Our results reveal that the threshold concentration for effective depletion of mature miR-125b was much lower for siRNA in comparison to morpholino.

10:30
Kathryn Van Veen: Virginia Military Institute and Washington & Lee University

The Role of Estrogen and Nicotine in Inhibition of Apoptosis
Apoptosis promotes the natural removal of unwanted cells. This lab set out to determine the role of estrogen in preventing camptothecin-induced apoptosis in the zebrafish. Although higher physiological concentrations of estrogen (10-6 M) caused paradoxical effects - pre-treatment increased sensitivity to camptothecin, while co-treatment consistently protected - a dose-response study found that 10-10 M estrogen was protective in all treatments. Future research will focus on developing a quantitative mechanism for measuring apoptosis using acridine orange fluorescent staining. The zebrafish-estrogen paradigm is being applied to a nicotine experiment to determine if non-lethal doses of nicotine can inhibit apoptosis. It is hoped that our research may lead to a better understanding of how to prevent or treat neurodegenerative diseases that are initiated by apoptotic cell death.

Session V

11:00
Mason Vines: Roanoke College

Maximal Independent Sets and Optimal Channel Assignment for Wireless Networks
With the recent increase in the use of wireless technologies has come the problem of interference. Interference is caused when two devices that are relatively close to each other try to transmit on similar frequencies. We can reduce interference by using channel assignment techniques, which partition the given radio spectrum into a set of disjoint channels that can be used simultaneously by stations while maintaining acceptable radio signals. The goal is to find channel assignment such that the difference in the frequency of any two adjacent stations is as large as possible, while using as few frequencies as possible. We modeled the wireless network as an infinite graph whose vertices represent transmission stations and whose edges correspond to stations that can hear each others transmissions.

11:15
Suzanne Harvey: University Of Virginia and Sweet Briar College
Co-authors: Kenne Zony, Boris Kovatchev, Martin Straume

Analysis of Continuous Glucose Monitoring (Cgm) Data of a Type 1 Diabetic Patient Pre and Post Islet Transplantation: Treatment Effect, Risk and Glucose Fluctuation Regularity Assessment
The development of new technologies, such as Continuous Glucose Monitoring (CGM) and Islet Transplants, provides physicians with new methods to treat hypoglycemic-unaware Type 1 Diabetic patients. However, besides a physician's assessment, no other measures are used to classify a patient's health. We utilize several Self-Monitoring of Blood Glucose (SMBG)-based techniques to quantify the health of a Type 1 Diabetic patient, pre and post islet transplantation. This analysis was applied to CGM data of a Type 1 Diabetic patient that underwent two islet transplants. Our research shows SMBG-based measures can be applied to CGM data, and this analysis can be used to objectively categorize a patient's health. The use of such computations may assist in optimizing a patient's overall diabetic treatment by providing interpretable information of a patient's condition.

11:30
Christopher Smith: Roanoke College

Channel Assignment Problem in 3-Dimensions
With the increase in the number of wireless devices available to the public, it has become necessary to assign frequencies to these devices so that their signals do not interfere with each other. This assignment of frequencies is known as the Channel Assignment Problem. Most previous research in the Channel Assignment Problem has been done in only two-dimensions. The need has arisen, however, to study this problem in higher dimensions. An example of this need would be a high-rise apartment complex, where devices located on different floors of the complex still need to have different channels than those around them. In this project, the Channel Assignment Problem was studied in three-dimensions.

11:45
Miguel Cervoni: Virginia Military Institute

Beam Transport in the Ut-P/Niels Accelerator
The energy loss spectrometer accelerator was modeled on the computer in two sections. The first section modeled the ion source and einzel lens, while the second section modeled the injector and accelerator column. The einzel model showed that the beam behaved normally and this was later confirmed by experimental data. The accelerator column model showed that the beam dispersed before the target cell. The electrical configuration of the accelerator was altered by adding a resistor at the beginning of the column, the potential on the center element of the injector was related to beam dispersion. The model found that the center element should be at the same potential as the other elements, which helped improve the beam transport percentage at the target cell.

12:00
Bret Ewing Newton: Hampden-Sydney College

Resource Allocation in Presidential Elections Based on Past Voting Patterns
Using past voting patterns of the 1964 through 2004 Presidential elections, the power of each of the fifty-one voting bodies in the United States can be determined by using the Shapley-Shubik Power Index which, in turn, is used to determine resource allocation in Presidential elections. The power calculation for all fifty-one voting bodies is daunting and superfluous since some voting bodies can be eliminated as sure voters for the upcoming election. In the process of discovering the power of the remaining states, some states lean slightly more Democratic or Republican, which requires an adjustment be made to the power values. With the final power calculated for the states that remain,

determining resource allocation is a simple matter of allotting the percentage of resources equal to the percentage of power the voting body possesses.

Session VI

11:00
Carlina Muglia: Sweet Briar College

The Effects of an Ecologically Relevant Auditory Stimulus on the Behavior of Male and Female Japanese Quail
The present experiment was designed to determine if a species typical auditory cue could condition a place preference in male and female Japanese quail (Coturnix japonica). Male and female birds experienced ten conditioning trials using a standard conditioned place preference (CPP) procedure. During each trial, a 30 second recording of the male's species typical call was presented on one side of a two-sided chamber and 30 seconds of white noise was presented on the other. Despite extensive conditioning, neither the males nor the females developed a CPP for the side associated with the male's call. These results suggest that the male's call is not perceived as an unconditioned stimulus by either sex of the species. Experiments are underway exploring the use of the male's call as a conditioned stimulus.

11:15
Kira Walsh: Christopher Newport University
Co-authors: Jacob Smeland, Kira Walsh, Cameron Smith, Richard Walker, Jeffrey Gibbons

Reiterative Synopses Lead to Encoding Specificity in Newspaper Headlines but Interfere with Recognition in Tabloid Headlines
In the current study, the believability of newspaper headlines and the presence of synopses following these newspaper headlines were manipulated. Participants utilized a Likert-type scale to rate the believability of both unbelievable and believable headlines at two presentations, time 1 and time 2. In addition, participants made recognition judgments for the headlines at time 2. The presence of synopses at time 1 and at time 2 increased recognition for believable headlines, in accordance with the encoding specificity hypothesis. However, unbelievable headlines prompted greater recognition if synopsis conditions were not congruent (i.e., synopsis present at time 1 but not at time 2).

11:30
Michelle Gerth: Christopher Newport University
Co-author: Dr. Jeffrey Gibbons

The Fading Affect Bias Across Event Type, Event Affect, and Event Age in Elderly and College Populations
The fading affect bias is a phenomenon in which emotions associated with negative events fade faster over tie than emotions associated with positive events. The current study examines the fading affect bias and its relation to event type (existential, regular), event affect (negative, positive), and event age (recent, remote), in college and elderly samples. Overall, negative events faded faster than positive events. In addition, regular events faded faster than existential (life defining) events, and remote events faded to a faster degree than recent events. The only difference between the age groups was that recent negative existential events faded to a greater degree than recent negative regular events in the elderly, but not in the college sample.

11:45
Audrey Mangrum: Radford University

Roanoke Offender Re-entry Program Demographics
In an attempt to reduce the recidivism rate among criminal offenders Virginia has launched a re-entry program that is geared toward helping offenders make a smooth transition back into the community. This is a three phase program that those screened into the program complete 90 days before their release. The first phase is an educational phase that includes classes on life skills, thinking errors, employability, conflict resolution, substance abuse, and anger management. The purpose of this study is to look at the demographics of the inmates that are coming back to the Roanoke area and compare them with the State's demographics. Preliminary results indicate that although inmates do not like returning to a local jail, they do appreciate newly acquired knowledge about community resources available to them.

12:00
Beth Ann Bachovin: Neumann College

Childhood Aggression and Future Adolescent Violence
Violent crimes committed by adolescents are always in the news, whether it is school shootings, young murders, or the new bullying zero tolerance policy of schools. Being able to predict later behavior problems gives society a chance to prevent future problems. The purpose of this paper is to review and consolidate the information on the effect of early aggression on later behavior and to make suggestions for prevention of violence.

Session VII

11:00
Samantha Sprole: Mary Baldwin College

Building Minds for the Future: A Renewed Look at Affirmative Action During Globalization
In 1996, Proposition 209 eliminated affirmative action policies from college admissions, government hiring, and public contracting in California. With more states considering similar legislation, America's great controversy over equality, liberty, and diversity is far from settled. I analyze the philosophical underpinnings of opposing sides in the affirmative action debate using principles put forth in John Rawls' Theory of Justice as well as contemporary thinkers' conclusions about the value of multiculturalism and diversity. By analyzing these foundational principles, extirpating the debate from inflammatory rhetoric and media sensationalism, I furthermore identify values shared across the political aisle and formulate a renewed framework for discussing affirmative action. This framework emphasizes a contemporary understanding of effective education and commercial success in a globalizing society.

11:15
Amanda Glover: Virginia Commonwealth University

Mining Ventures in the Guatemalan Highlands: A Question of Human Rights for Indigenous Mayan Peoples
Since the ratification of their Peace Accords in 1996, Guatemala has attracted foreign investors, among them American and Canadian gold mining corporations. This current situation is but one among many cases in which the governments of developing countries have engaged in projects that negatively affect their large native populations. Many of the Guatemalan highland mining practices destroy the land needed for agriculture thereby destroying local economies. Corporate mining practices also violate Mayan religious beliefs that are protected under ILO Convention 169 to which Guatemala is a signatory. Considering many factors discovered through time spent in Guatemala as well as literature review on the topic, I argue that the Guatemalan government is unjustified in allowing foreign investors to perform cyanide mining in its highlands.

11:30
Wade Rice: Neumann College

The Animal Farm
My presentation will be on the production of animals for consumption and clothes. The presentation will consist of examples of different industries that use mass production of animals to create a product for humans. The examples will touch on the way in which the animals are raised and produced in order to create the best product. In most cases this causes harm to the animal and puts the animal in abnormal situations and environments.

11:45
Geoffrey Parker: Virginia Military Institute

Understanding Growth: Economic Adventures with Ethnic Tension
Economists view growth as a function of economic, social, and political characteristics of a nation. While the importance of economic factors has already been established, the relationship of social or political factors and growth is not fully understood. Previous work has shown the a priori effects of social divisions, but little quantitative work has been conducted in this area. From this work, we can hypothesize that countries with ethnic diversity and tension will have lower rates of long-term growth. For this study, we use economic, political, and social data from 119 countries to define the relationship of ethnic tension and long-term economic growth.

12:00
Ira Hobson: Neumann College

The Unseen World of Transnational Corporations' Powers
I intend to illustrate that transnational corporations have considerable wealth and power in the global society under the pretense of capitalism. This has resulted in the decline of democratic principles as well as the abuse of third world countries. I will document this claim by a variety of examples.

Session VIII

11:00
Candace Hoffman: Meredith College
Co-author: Dr. Rebecca Duncan

Floating on Fact: *Life of Pi* as Postmodern Survival Narrative
Survivor literature records the struggle to recover selfhood. This struggle may involve negation, as in Elie Wiesel's denial of God in Night, yet the subgenre generally presumes the possibility of a stable, unified self. What happens when a survivor's experience and recovery occur in a postmodern context that questions notion of selfhood? Like Melville's Ishmael, Martel's Pi Patel relies on fact and facticity to construct his self and world. In youth he drifts among three religions and zoological minutiae. When literally adrift and fighting for survival, he confronts the materiality of the encyclopedic and theoretical pastiche that has constructed his selfhood. Pressing questions--rendered more complex by a somewhat intrusive authorial voice—involve relationships of fact to truth and truth to new notions selfhood.

11:15
Jennifer Pinto: Neumann College

Kafka's Metamorphosis and American Materialism
I intend to argue that in Franz Kafka's The Metamorphosis, Gregor's physical transformation is representative of how materialism in the modern world degrades humans. I will start by examining the textual evidence and then follow this with an examination of the scholarly literature and interpretations of the text. I will conclude by showing how the text and literature support my argument.

11:30
Nell Champoux: Sweet Briar College

Vision not Visionary: Discourses of Sanctity in John Of Morigny's *Liber Visionum*
Several editions of a manuscript entitled the *Liber Visionum*, or The Book of Visions, have recently come to light. This text, written by John of Morigny, a fourteenth century French monk, provides instructions for a practice that, if followed correctly, results in divine visions and knowledge of the seven liberal arts. The classification of this text is contested in both modern and medieval systems -- it may be aligned with necromantic magic, (relativly) normative Christianity, or something in-between. While scholarship exists on necromantic texts, Christian texts, and texts including aspects of both, little work has been done on the area of betweeness during the middle ages. Despite this dearth, the category of betweeness is invaluable for the analysis of John of Morigny's *Liber Visionum*.

Session IX

3:00
Denva Jackson: Sweet Briar College

The Geography of the Imagination: Understanding Place in John of Morigny's *Liber Visionum*
In the prologue to the fourteenth-century visionary text, the Liber Visionum, its composer, John of Morigny (active 1304-1323), presents Chartres Cathedral as a regular setting in which he envisions the Virgin Mary. John's prologue is a narrative account of the visions that led him to create the Liber Visionum. In it, Chartres takes on the preeminent role of legitimizing the Liber Visionum as a whole, where the building becomes a vindicating force as it assumes material, three-dimensional form through the readers' vivid mental imaging of the structure. John evokes the materialization of Chartres within the readers' mind's eye through his narrated circumambulation and exploration of

the cathedral. As he describes his movement around the cathedral, revelations about the Liber Visionum are exposed visually in the fabric of the church and ceremonially through his journey.

3:15
Lisa Riley: James Madison University

The Devil vs. the Saint: Portrayals and Images of Children in New France
When the Jesuits first arrived in New France, they came with the goal to convert the “savages” into civilized Christians. Encouraged to turn all natives into pious Christians, the Jesuits preached morals, taught virtues, and condemned all aspects of native life. Among the Jesuits’ plan for complete conversion, children played an important role in ensuring a new generation of Christian upbringing. Although Jesuit correspondence and relations highlight the role of women and men in society and presumed conversions, children’s silent voices are heard through the two roles Jesuits assign them: devils and saints. Children were pawns as all other natives were in the Jesuits’ eyes, and their strict good versus evil nature played into Jesuit motives to steal and reinstruct children in their own beliefs.

3:30
Sarah Elizabeth Moser: James Madison University

"Women of the Town": Prostitution in Eighteenth-Century London
Eighteenth-century London was home to tens of thousands of prostitutes. Observations of these unfortunates survive almost exclusively from the writings and artwork of middle or upper class males who mainly condemned them as spreaders of disease and immorality. Later in the century, new perceptions of the common harlot as a victim gave rise to aid via treatment for venereal disease and/or sanctuary from the streets, but could only give assistance to a few hundred every year. Therefore, those women who fell into the category of "whore" had an exceptionally hard existence, most of which had never foreseen for herself this profession/lifestyle. Concentrating mainly on standards of living and daily activities of prostitutes, this paper relies heavily on primary sources from the period.

3:45
Margaret E. Loebe : Sweet Briar College

Christine de Pizan's Pro-Woman Message: Combatting Misogyny with Morality
In Christine de Pizan's contribution to the “querelle de la Rose”, she rejected 3000 years of male-dominated literature by arguing that women are morally equal to men and should be treated as such. In the “Book of the City of Ladies” and in the “Book of the Three Virtues”, she argued that women are in fact historically and naturally moral leaders in their communities.

Session X

3:00
Chelsea Hersch: James Madison University

The Evolution of SNCC: From Nonviolence to Militancy
The Student Non-Violent Coordinating Committee (SNCC) was one of the most unique and controversial groups to evolve from the American Civil Rights Movement of the 1960’s. This paper examines SNCC’s involvement and influence on the movement overall but focuses primarily on its evolution from a nonviolent to a more militant organization. During its early years, students employed nonviolent tactics of the SCLC and other well-established civil rights organizations. In the last few years of SNCC’s existence “Black Power” and militancy had found their way into the mission statement of the student organization. This paper examines what role Freedom Summer played in the transition as well as the effects of other memorable civil rights campaigns and events including the March on Washington and the Philadelphia murders

3:15
David L Allen: James Madison University

Robert Mcnamara: Reformation of the Department Of Defense
Robert S. McNamara, as Secretary of Defense from 1961-1968, combined activist and managerial techniques to reform the Department of Defense during the height of the Cold War. Though his critics complained of his focus on

statistical data over human requirements, McNamara restructured the Defense Department to maximize efficiency and flexibility. His ability to challenge military officials increased the focus on effectively protecting American national interest on multiple levels ranging from the constant threat of nuclear war with the Soviet Union to 'wars of liberation' in third world countries. Through his restructuring of the budget process and flexible military response options, Robert McNamara was influential in asserting civilian control over the military.

3:30
Shaun M Jones: Virginia Military Institute

Ambassador Joseph Kennedy: Appeasement and the Pre-War Government at the Court of St. James
During the late 1930's Joseph Kennedy was appointed as the American ambassador to the court of St. James. Known for his isolationist tendencies the Catholic millionaire pursued his own political agenda within that of his president's and encouraged Chamberlain's appeasement policies. Years later his son, and future president John F. Kennedy, wrote his Harvard thesis on Britain's lack of preparedness for the war, in part because of those same policies. The nuances of Joseph Kennedy's politics and his relationship with members of the British government had substantial impact of the war's first years and the exploration of these details will unveil the particulars of early British policy.

3:45
Jason Richards: James Madison University

King of Good Intentions: Gorbachev's Foreign Policy and the Collapse of the USSR
This presentation centers on the foreign policy implications for the collapse of the USSR in December of 1991 under Mikhail Sergeevich Gorbachev. A brief historical background will be given, followed by look at Gorbachev's radical plan to reform the Soviet Union's political and economic systems, which carried over into his foreign policy. Next, his policy concerning the United States, Germany, and Eastern Europe will be discussed in succession. The presentation will end with a discussion of the aftermath of Gorbachev's foreign policy and how it directly led to the collapse of the Soviet Union.

Poster Session

1.
Kara Segna: Christopher Newport University

Penicillium Marneffei: Fungal Pathogen
The fungal pathogen Penicillium marneffei is a significant opportunistic infection in Southeast Asia among immuno-compromised individuals. Although it is related to other Penicillium species, P. marneffei shows dimorphism unique to its genus. At 25ºC, P. marneffei grows as a monomorphic mould, exhibiting the characteristics of other members of its genus. However at 37ºC, P. marneffei grows in a yeast-like form, known as arthroconidium. The secretome of an organism comprises all proteins secreted into the surrounding environment. The yeast form of P. marneffei secretes different proteins than that of the mould form. We analyzed the secretome by means of 1 and 2 DGE electrophoresis after pre-fraction by liquid isoelectric focusing. An identification and understanding of these form-specific proteins will further our understanding of the pathogenic processes in this and other fungi.

2.
Dustin Carroll: Roanoke College

Kinetic Study of Cathepsin S with Caspase and Granzyme B Inhibitors
In the last 35 years the process of apoptosis has become increasingly important. To date, most of the understanding of this process has come largely from a group of proteases known as the caspases. This study focuses on the lysosomal protease cathepsin S. Studies of the past have used certain caspase 3 and granzyme B specific inhibitors as a means of stopping apoptosis while ignoring the action of the cathepsins. This study has shown that these caspase 3 and granzyme B specific inhibitors do, in fact, seize the enzyme activity of cathepsin S. This strongly supports cathepsin S's role in apoptosis, for the aforementioned inhibitors could have acted on cathepsin S prior to or in conjunction with inhibition of their "specific" enzyme.

3.
David Walker: Longwood University
Co-author: Dr. Gary Lutz

Microarray Analysis of Saccharomyces Cerevisiae Cells under Environmental and Chemical Stress
Microarray analysis of Saccharamyces cerevisiae cells exposed to stresses such as ultraviolet radiation or a common plasticizer like dibutyl phthalate (DBP) have been performed. An illustration of the microarray techniques employed and evidence of changes in gene expression as a result of the stresses will be presented. In both types of experiments, the cells were harvested at the log phase, and mRNA was extracted. The mRNA was converted to cDNA and labeled with Cy3 and Cy5 dyes. Labeled cDNA was then hybridized onto yeast microarray chips. Data analysis was performed using the computer programs Magic Tool and Significance Analysis of Microarray (SAM). Preliminary analysis of this microarray data indicates repression and induction of certain specific genes.

4.
Chevon Dunnings: Christopher Newport University
Co-authors: Linnea Harper, Alicia G. Middleton, Amber L. Richards, Tiffany J. Schuldt, Kara G. Segna, Fallon A. Shippen, Lisa S. Webb, Harold J. Grau

Genetic Analysis of Isolated Stainer Populations: Preliminary Results
We investigated possible genetic polymorphisms among several geographically isolated populations of St. Andrew cotton stainer (Dysdercus andreae) on St. Thomas, U.S. Virgin Islands. Geographic isolation of these populations could lead to some degree of genetic distinction, and an earlier morphological analysis has shown that phenotypical differences exist between these populations. We have successfully extracted DNA from dried specimens of D. andreae and used polymerase chain reaction procedures to amplify segments of genes from both the mitochondrial and nuclear genomes. We utilized restriction endonuclease digestion to confirm the identity of the amplified sequences. We will use these procedures, along with DNA sequencing of the amplified segments, to analyze the remainder of the isolated populations for genetic polymorphisms.

5.
William A. Lancaster: Roanoke College
Co-author: Vernon R. Miller

Diel Variations in Mason Creek, Roanoke County, Va
The variations in concentrations of 15 analytes over a 24 hour period were detemined for a site on Mason Creek in Roanoke County, VA. Many analytes, namely alkalinity, temperature, pH, dissolved oxygen, nitrate, and manganese showed the expected diel variation. Other analytes, namely conductivity, sodium, and potassium showed no variation. Several analytes, consisting of lead, iron, calcium, and magnesium were inconclusive. Two analytes, nitrate and phosphate were too close to the detection limit for any conclusions to be drawn. The effect of a small rain event in the middle of the afternoon showed up obviously in the readings for conductivity, alkalinity, sodium, potassium, and inconclusively in others.

6.
Danielle Strickland: Christopher Newport University
Co-authors: Danielle Strickland, Amanda Ross, Mariyana Tasheva, Tarek Abdel-Fattah

Modification of Low-Cost Adsorbents for Perchlorate Removal from Aqueous Media
Perchlorate is a health concern because when ingested it can block the uptake of iodine in the thyroid gland, affecting the production of thyroid hormones and possibly causing mental retardation in fetuses and infants. The objective of this study is to examine the adsorption capabilities of low-cost adsorbents such as activated carbon (Calgon Filtrasorb 400), two naturally occurring zeolites (clinoptilolite and chabazite) and synthetic zeolites (13X and 5A) for perchlorate removal from aqueous media. The adsorbents improved sorption capacities by treating them with 0.1 M solutions of CaCl2 or FeSO4. Batch adsorption studies were conducted to evaluate the adsorbent ability to remove perchlorate from water. In a batch sorption experiment, approximately 83% of the 50 ppm perchlotate solution was removed by using the modified adsorbents.

7.
Kathleen M. Wilson: Sweet Briar College
Co-author: Dr. Joseph Ortiz

Measuring the Particulate Content in Lake Erie Using a Malvern Mastersizer 2000 and A Labspecpro Fr
To monitor the Great Lakes with Landsat imaging, various analytical approaches can be used to help determine visual interference in the color imaging of the Western basin of Lake Erie. Anticipated causes for this visual flaw are zooplankton, suspended sediments and chlorophyll A. Water samples were collected from a research cruise vessel and analyzed using standard procedures for a Malvern Mastersizer 2000 and a LabSpecPro FR. The Malvern instrumentation determines the particle size distribution and volume concentration, while the LabSpecPro FR analyzes the chlorophyll A content through a GF/F Millipore filtration system. Statistical analyses were performed on the data collected from both techniques and compared to data collected onboard the research vessel. A correlation was determined from the FR data and the research vessel light spectrum data.

8.
Mariyana Tasheva: Christopher Newport University
Co-authors: Danielle Strickland, Amanda Ross, Tarek Abdel-Fattah

Removal of 2,4-Dichlorophenol from Aqueous Solutions Using Organo-Silicate Materials
Dichlorophenols (DCP) are aromatic compounds used as antiseptics, herbicides, wood preservatives, and in the paper and pulp industry. The Environmental Protection Agency (EPA) has placed 2,4-dichlorophenol (2,4-DCP) on the drinking water contaminant candidate list with a proposed safe limit of 3 mg L-1. The objective of this study involves the use of synthesized adsorbents for the removal of 2,4-dichlorophenol (DCP) from an aqueous media. The materials synthesized for this study were organo-silicate materials (OCS). The synthesis of these materials form hexagonal mesoporous lattice structures with organic components on the lattice structure giving them their hydrophobic and organophilic properties. These adsorbents are studied to determine their ability to remove DCP from an aqueous media through batch adsorption studies. All OCS materials remove more than 90-percent of the 2,4-DCP after 72 hours.

9.
Anna L. Kostric: Roanoke College
Co-author: Vernon R. Miller

Borane Exchange Reaction of 1,4-Dimethylpiperazine Bisborane with 1,4-Dimethylpiperazine
Previous researchers at Roanoke College have looked at the borane (BH3) exchange reaction of a diamine bisborane (a diamine with a borane on each of the two amine groups) with the free diamine to give a product in which the diamine has a borane on only one of the amine groups. In these experiments the diamine has been 1,4-diazabicyclo[2.2.2]octane (DABCO) or N,N,N',N'-tetramethylethylenediamine (TMED). This research has completed this series of diamines by examining the reaction of 1,4-dimethylpiperazine (DMP) with its bisborane. The equilibrium constants and rate constants were examined in deuterated chloroform and acetone. While the interpretation of the data with DABCO or TMED as the diamine was straight forward, the DMP data has presented more challenges.

10.
Erica Kennedy: Sweet Briar College

Co2 Reduction Chemistry
The electrochemical reduction of CO2 by transition metal catalysts has become an area of great interest. The reduction of CO2 would ultimately form carbon- carbon bonds, thus mimicking photosynthesis. In nature, photosynthesis occurs when chlorophyll absorbs a photon and initiates reduction of CO2. Since CO2 is thermodynamically stable and chemically inert, the activation of CO2 is difficult and synthetically utilizing CO2 efficiently has been difficult. Having characterized both the hydrated and anhydrous forms of our catalyst, [Pt (dpk)Cl4], some preliminary CO2 reduction data and electrochemistry data confirms that possible development of a system in which two CO2 molecules are reduced simultaneously ultimately forming carbon-carbon bonds. We want to explore the general applicability of our catalyst to other small molecules such as CO and H2.

11.
Michael Joyce: Longwood University

Synthesis of Diphenylketones as Probes for Directed Metallation Experiments
Enolates are important intermediates used in organic synthesis. Normally, deprotonation reactions in ketones occur only at the alpha positions to form enolates. The synthesis of a series of diphenyl ketones designed to investigate the directing ability of an enolate ion towards the removal of a second proton that is normally not considered to be acidic

is being reported. Deuterium isotope exchange reactions were used to clearly distinguish between the benzylic positions and the alpha positions and these results will also be presented.

12.
Jason M. Wolfe: Roanoke College
Co-author: Vernon R. Miller

Equilibrium Constant of Bromothymol Blue
To develop a Physical Chemistry experiment showing the interaction of ionic strength and activities on an equilibrium constant, the acid dissociation constant of bromothymol blue was studied as a function of ionic strength. Ionic strength was varied from 0.0003 to 1.0003 M, concentrations of hydrogen ions were determined by using a pH electrode, and concentrations of the acid and base forms of bromothymol blue were determined by visible spectroscopy. When concentrations were converted to activities using the Debye-Huckel extended equation, the value of pKa was found to be 7.281. When activities were not used, pKa varied from 7.35 to 6.81. An interesting sidelight is that the actual pH electrode used was very important in getting valid numbers.

13.
Kimberly Berndsen: Roanoke College

Analysis of a Helicase-Dependent Isothermal Dna Replication Process for Use with the Tho1 Short Tandem Repeat
Helicase-dependent DNA amplification is a new technique for DNA replication developed by Vincent et al. which mimics in vivo DNA replication and can be carried out at constant temperature. The process unwinds DNA using an enzyme called a helicase. The helicase works successfully under certain conditions; however, its application to replicating human genomic DNA is limited at this time. This project describes attempts to apply helicase-dependent replication to the THO1 locus found on chromosome 11.

14.
Mithilesh Adhikari: Hampden-Sydney College
Co-author: H. J. Sipe, Jr., Department Of Chemistry, Hampden-Sydney College

Electron Spin Resonance Study of Phenoxyl Free Radicals of Bisacodyl Analogues
Bisacodyl, the active ingredient used in over-the-counter laxatives resembles phenolphthalein in chemical structure. Use of phenolphthalein in such laxatives was discontinued because of the likelihood that it was carcinogenic, perhaps from oxidative stress by metabolic activation of phenolphthalein to phenoxyl radicals. We expected the hydrolyzed product of bisacodyl, desacetylbisacodyl [DABC], would be oxidized to unstable phenoxyl radicals as was phenolphthalein. We report the synthesis of four desacetylbisacodyl analogues designed to have more stable phenoxyl radicals by virtue of having bulky substituents ortho- to the phenolic site. We report successful steady-state ESR observation of phenoxyl radicals produced by either chemical or biochemical oxidation of three of the four DABC analogues. The ESR spectral assignments are consistent with previously reported results for phenolphthalein and related phenoxyl radicals.

15.
Ben Lawler: Roanoke College

Diels-Alder Chemistry of a Highly Fluorinated Cyclopentadienone Derivative
The oxidation reaction of 1,2,4-perfluorophenylcyclopentadiene with N,N-dimethyl-4-nitrosoaniline (DMNA) in anhydrous THF and subsequent acid hydrolysis provided a crude mixture of products that contained the cyclopentadienone derivative. This derivative was heated with excess phenylacetylene and an inverse-electron-demand Diels-Alder reaction was attempted. Product mixtures were separated via column chromatography with a 10% dichloromethane/90% hexane solution. Products were analyzed with TLC, 1H NMR, and 19F NMR. Although not conclusive, the results point to production of the desired cycloadducts.

16.
Alissa A. Gadpaille and Beth A. Tucker: Roanoke College

Initial Experiments Using Surface Plasmon Resonance and Raman Spectroscopy

The purpose of these experiments was to use Surface Plasmon Resonance (SPR) to monitor substrate deposition on a gold film. SPR is a phenomenon that occurs when light photons are converted to plasmons at a gold surface, and it can be used to monitor deposition of a substrate on the other side of the gold. In this research, SPR instrumentation was developed in order to monitor the deposition of a self-assembled monolayer of 11-mercaptoundecanoicacid. In future research, this monolayer will serve as a template for calcium carbonate growth, and SPR will be used to monitor the growth and degradation of this calcium carbonate layer. In the future, Raman spectroscopy will be used to identify the polymorph(s) of calcium carbonate grown.

17.
Marcella Torres-Johnson: Virginia Commonwealth University

AFM Studies of Oxygen Etching Of Silicon Surfaces
This study uses atomic force microscopy to examine the effects of oxygen etching of silicon surfaces. These interactions can change the surface morphology, affecting device performance. Silicon with various surface orientations at sample temperatures ranging from 700°C to 850°C was exposed to oxygen for 2 to 50 minutes at a pressure of 3.3 x 10^-7 Torr. The morphology resulting from etching is directly affected by surface orientation. The Si(001), Si(111), and Si(113) orientations are stable against etching and form flat terraces with islands resulting from oxygen etching around nucleation sites. Si(5 5 12) and Si(112) are unstable and form sawtooth facets of other nearby orientations. By changing the temperature and exposure time, a variety of surface morphologies can be formed.

18.
Michael L. Antolini: Hampden-Sydney College
Co-author: H. J. Sipe, Jr., Department Of Chemistry, Hampden-Sydney College

Fast-Flow Electron Spin Resonance Spectroscopic Studies of Phenolphthalein Phenoxyl Radicals
Phenolphthalein, a bis-phenol, was formerly widely used in over-the-counter laxative products. Biochemical peroxidases readily catalyze formation of unstable phenoxyl radicals of phenolphthalein. These radicals produce oxidative stress by reacting with endogenous reductants, and this stress may possibly contribute to carcinogenicity of phenolphthalein. Phenolphthalein phenoxyl radicals reported previously required expensive amounts of horseradish peroxidase [HRP] for their biochemical generation in a fast-flow system. We report here successful observation of those radicals using an inexpensive biochemical oxidizing system, hemoglobin/H2O2. Using the chemical oxidation system Ce(IV)/H2SO4, we also report generation of higher concentrations of phenolphthalein phenoxyl radicals with correspondingly higher signal-to-noise ratio and better resolved ESR spectra.

19.
Karen A. Chachula: Washington & Lee University
Co-author: Joel P. Kuehner

Advancement of the Small Aperture Beam Technique for Density Measurements
Our project focuses on the use of a laser to measure density variations of a flowfield. In the past, efforts have utilized a variety of laser diagnostic techniques, but as of yet there has been little work that has been able to overcome the noise of the measurement system and precisely asses the flow-induced density oscillations. A most promising method is the small aperture beam technique (SABT). This technique relies on the fact that changes in density in a flowfield cause the laser beam to be steered as it passes through. The goal of this project is to modify SABT to measure beam motion and infer density variation. This will lay the groundwork necessary to simultaneously measure the motion and variation, and explore their relationship.

20.
Kim Wadelton: Sweet Briar College and University of Florida through the National High Magnetic Field Laboratory REU and the NSF
Co-authors: Marianna Worczak, James Davis, Mark W. Meisel

Effects of High Magnetic Fields on Transcription Reactions: The Magnetic Anisotropy of T7 RNA Polymerase
The diamagnetic properties of the T7 RNA polymerase have been investigated to test the hypothesis that strong magnetic fields generate subtle perturbations of the polymerase due to the structural diamagnetic anisotropy of the molecule. These possible effects may be the cause of a biochemical stress response previously detected in plants. The maximum energy arising from the protein's orientation in a strong magnetic field was estimated. At 9 Tesla, this magnetic energy is approximately 10-100 ppm of the ambient thermal energy. A one-dimensional model was

proposed of the deformation of the thumb alpha helix of the polymerase. Distortion forces estimated were ~4 orders of magnitude smaller than those forces required to stop transcription completely.

21.
Christian H. Brown: Virginia Military Institute

Optical Tweezers
Optical tweezers is a relatively new method of using light as a tool to manipulate the position and orientation of small objects ranging in size from 100 micrometers to as small as a single atom. A laser beam is refracted through a series of converging and diverging lenses into a microscope and finally on to a glass slide containing the specimen. This creates gradient force traps on the specimen allowing it to be manipulated. Optical tweezers are used in general to manipulate dielectrics, cells, viruses, and even DNA. The manipulation of these objects has far reaching implications in many applications outside the field of physics. In our setup we use a 632.8 nanometer wavelength He-Ne laser beam to manipulate polystyrene spheres three micrometers in diameter.

22.
Darren Wellner and Chris Petree: Virginia Military Institute

Mechanical Fish Project
This discussion addresses the fabrication and testing of a mechanical fish. This fish is driven by a sinusoidal motion of the tail and is tested at different amplitudes and frequencies. The fish is neutrally buoyant and is driven by a battery powered electrical servo motor. The position of the fish as a function of time is measured in order to compute velocity as a function of time.

23.
Kristina Potter: Christopher Newport University
Co-authors: Christine Hilderbrand, Eric Lynn, Andrew Velkey

The Magic Number 4 Plus or Minus 1: Examining Spatial Memory in Betta Splendens
Previous research in our laboratory has revealed that Siamese fighting fish (Betta splendens) have some capacity for spatial memory, but a large number of foraging errors at the end of a bout suggests that the capacity of their spatial memory is not large. The current study consists of 2 experiments in order to assess the memory capacity of Betta. In experiment 1 and 8-arm radial maze, with 4 arms blocked off, allows the Betta to hunt for their daily food in order to determine the minimum memory capacity of the fish. The number of errors made while foraging for food decreased to zero as the fish learned the maze. In experiment 2, additional arms of the maze will be unblocked, one at a time, until the fish have an above-chance error level, indicating the limit of the fish's spatial memory capacity.

24.
Herman Diggs: Christopher Newport University
Co-authors: Molly Matthews, Dr. Andrew Velkey

The Relation of Body Size to Dominance-Submission in Siamese Fighting Fish
The current study examines the relation of body size to the dominance-submission choice of Siamese Fighting Fish (Betta splendens). Subjects experience instrumental choice trials in a T-maze. During each trial, subjects choose between an aggressive choice (mirror presentation) and a neutral choice (no mirror presentation). Gill erection duration is also being measured to determine overall aggressive response. Larger fish are expected to show a preference for the aggressive choice while displaying aggressive behavior during mirror exposures, whereas smaller fish are expected show a preference for the neutral choice or display a more submissive posture during mirror presentations. Implications of these findings could suggest that larger animals show a preference for aggressive encounters and are prone to more aggressive responses than smaller animals.

25.
Heather Sutton: Christopher Newport University
Co-authors: Molly Mathews, Jessica Parker, Dr. Andrew Velkey, Dr. Tarek Abdel-Fattah

The Effects of 4-Nonylphenol on Aggression and Bubble-Nesting in Male Bettas
The current experiment examined the effects of 4-nonyphenol (4-NP, an estrogen agonist) on bubble nesting and aggressive behaviors in Siamese fighting fish (Betta splendens). 6 fish served as controls, 6 fish were exposed to 5.9

microliters/liter of 4-NP and 6 fish were exposed to 14 microliters/liter of 4-NP. Each group was observed for behavioral changes in aggression as well as disruptions in the size or quality of their bubble nests. Bubble nesting decreased with each level of 4-NP, and the initial findings indicate that sub-toxic levels of 4-NP could have detrimental effects on reproductively-relevant behaviors in Betta. More study is needed to determine if these findings are an indirect result of physiological stress of 4-NP exposure or the direct result of estrogen agonism by 4-NP.

26.
Carlina Muglia: Sweet Briar College

Does a Single Sex College Environment Reduce the Negative Effects of Stereotype Threat?
Stereotype Threat (ST) is the fear that one might perform according to the negative stereotypes associated with one's group. The present study was designed to determine if a single sex college environment reduces the negative effects of stereotype threat. Each participant's relative affiliation with the math or English domains was determined before they were administered a math test with directions that elicited ST. The results indicated that ST does not occur in a single sex college environment. Contrary to the results obtained in previous ST experiments, the Math-associated ST participants performed significantly better on the math test compared to the English-associated ST participants. These results suggest that women attending single sex colleges are less susceptible to the negative affects of ST.

27.
Elise K. Campbell: Christopher Newport University
Co-authors: Ashley Hallheimer, Thomas D. Berry

Parental Influence on Undergraduate Hygiene Habits and Perceptions of Hygienic Risk
Thirty four undergraduate students (17 female and 17 male) filled out a health survey that related family dynamics and students' hygiene habits and perceptions of hygienic risk. Results indicated that parents do have a substantial influence on students' health habits as well as risk perceptions regarding getting sick.

28.
Jennifer Dick, Dawn Martin, and Renee Tanner: Sweet Briar College

Expressions of Anxiety through the Use of Nonverbal Behavior in Introverts And Extraverts
Previous research has demonstrated behavioral differences between the personality types of introversion and extraversion. Other experiments have shown that individuals express their level of anxiety through nonverbal behavior. The present study was designed to determine whether introverts express more nonverbal behavior than extroverts in an uncomfortable situation. Participants were classified as either introverted or extraverted using Eysenck's Personality Questionnaire and then placed in one of two interview conditions. Some were asked anxiety-producing questions while others were asked non-anxiety-producing questions. Nonverbal behaviors, such as smile control and gaze shift, were measured in all of the participants. Results indicated that introverts in the anxiety-producing situation displayed the most of certain nonverbal behaviors. These findings suggest important differences in how introverts and extraverts respond nonverbally in anxious situations.

29.
Charis Lease-Trevathan: Sweet Briar College

Unusual Names and Their Effect On Personality Generalizations
This experiment investigated how different types of names are rated and how additional information affects name ratings. The types of names studied were common names, unusual spellings of common names and non-American names. Participants rated names on the traits of Success, Morality, Popularity, Warmth, Cheerfulness, and their interest in working with a person with that name. Non-American names were rated more positively on success and morality, but more negatively on popularity, cheerfulness and femininity. Common names were rated similarly to unusually spelled names, suggesting that unusually spelled names are more accepted than previous research suggested. Non-American names were rated differently from Unusually Spelled names, suggesting that different stereotypes are associated with different types of unusual names.

30.
Christina Shaheen Moosa: Sweet Briar College

Unification of "Metamorphoses"
The play "Metamorphoses", by Mary Zimmerman is an adaptation of Ovid's "Metamorphoses". The play uses the themes of love and change to articulate a better understanding of human nature. The play illustrates transformations that take place in ancient myths, by telling stories concerning life, death, and love. The themes, stories, and culture presented in the modern play and ancient text is analyzed in order to prepare for an upcoming student directed production of the play. This project includes careful script analysis, including historical research and the creation of a director's promptbook. Analysis of esthetic criticism is also used in order to better understand the art of theatre, and the director's relationship with the script, play, and audience. All of this preparation leads up to create a director's statement, as well as a body of work that will facilitate the direction and production of the actual play.

31.
Brandy Stinnette: Sweet Briar College

John Powell's Sonate Noble: The Impacts of Nationalism and Evolving Racism
John Powell (1882-1963) was a significant Virginian composer and white supremacist who also contributed to Virginian race relations. He began piano lessons first from his sister Elizabeth, and then studied with Frederick Charles Hahr. After graduating from UVA in 1901, Powell sailed to Europe to study in Vienna with Theodore Leschetizky. Through Powell's career we not only can trace the evolution of race relations in Virginia, but also in the development of American classical music. Ever since Antonin Dvorak's "Symphony from the New World" in 1893, the idea of American national composition struck worldwide. In the Twenties, Powell became outspokenly critical of the use of African American or Indian elements in American music. He turned instead to Appalachian Folk Music, which in his view was a better representation of mainstream America.

32.
Jessica Leigh Taylor: Sweet Briar College

The Effects of Absolute and Programmatic Music on Psychological States in College-Age Females
This study investigated the relationship between Programmatic and Absolute music and emotional elicitation in college-age females. Specifically, physiological measures of heart rate and blood pressure were utilized in combination with a self-reported measure of pleasure, arousal, and dominance to produce an overall measure of emotion. It was hypothesized that Programmatic music would elicit emotions corresponding to feelings of being dominated by the musical narrative of the story—which in turn would elicit stronger emotional states, and Absolute music would be less influential, and alternatively produce a means to interpret the music on an individual basis, with less emotional impact than Programmatic music. Results indicate that participants, dependent on their experimental grouping, had greater emotional elicitation when listening to a specific variant of music.