

Agnes Scott

Spring Annual Research Conference

April 26, 2012

SPARC



AGNES SCOTT COLLEGE

2012 **SP**RING **A**NNUAL **R**ESearch **C**ONFERENCE

The Spring Annual Research Conference (SpARC) is held at Agnes Scott College each April to provide students and faculty with an opportunity to present their work to the campus community. As an interdisciplinary conference, SpARC fosters essential connections across academic disciplines and encourages an ongoing dialogue among the liberal arts and sciences. Much of the research presented at the conference stems from collaborations between students and faculty members through directed readings and independent studies. In addition to promoting the development of students' research, presentation and analytical skills, SpARC gives all those in the Agnes Scott community an occasion to learn about the latest research being conducted by their colleagues.



Acknowledgements

2012 SpARC Committee
Barbara Blatchley and Gundolf Graml
Co-Chairs

*Special thanks to the following
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SpARC 2012

SCHEDULE OF EVENTS

9:00 – 10:10	SpARC Presentations Bullock Science Center Classrooms
10:10 – 10:50	SpARC Poster Presentations and Reception Woolford B. Baker Atrium Bullock Science Center
10:50 – 12 Noon	SpARC Presentations Bullock Science Center Classrooms
12 Noon-12:45	Dance Performance Gaines Auditorium
12 Noon – 1:20	Scottie Math Bowl Evans Hall, Terrace Level
1:30 – 2:15	Theatre Performance Winter Theatre, Dana Fine Arts Building
1:30 – 3:55	SpARC Presentations Bullock Science Center Classrooms



SCHEDULE OF PRESENTATIONS

PRESENTATION TIME	BSC 102W	BSC 103W	BSC 112W	BSC 209W	BSC 210E	BSC 304E	BSC 308 (SOC/ANT 391)
9:00-9:20	CHRISTEN THOMPSON ENGLISH LIT/ FILM STUDIES	BRITTANY NORRIS ECONOMICS/ ORGANIZATIONAL MANAGEMENT	CHRISTINE FRANZEL CHEMISTRY	ANDREA LOVE MUSIC	HILARY TOBIASZ, ET AL MATH	ALEX AMBROSE, ET AL PUBLIC HEALTH	9-9:15 CORI BRADWELL-COAXUM
							9:20-9:35 DESTANI PARKER
9:25-9:45	LISA MIELKE, ET AL ENGLISH	RACHEL BURGER POLITICAL SCIENCE	ALTHEA GUNTHER, ET AL	LOLA CLAIRMONT ART HISTORY	SHAN SHAN MATH	DESTINY DAVIS PUBLIC HEALTH	9:40-9:55 VIERGELINE FELIX
							10-10:15 RICHELLE MOORE
9:50-10:10	MARIAN MAY KAUFMAN ENGLISH/ CREATIVE WRITING	LAN MEI POLITICAL SCIENCE	QUYEN TRAN, ET AL CHEMISTRY	ANJANE WILLIAMS, ET AL THEME HOUSE	JORDAN KENNEDY MATH/BIOLOGY	DINA JONES PUBLIC HEALTH	
10:10-10:50	POSTER PRESENTATIONS, WOOLFORD B. BAKER ATRIUM, SCIENCE CENTER						
10:50-11:10	BHUMIKA PATEL WOMEN'S STUDIES/ ENGLISH	LISA MIELKE ASIAN STUDIES	CHARLA GRUBER PHYSICS	ANNALEE CRAIGMILE MUSIC	KELLY SMITH BIOLOGY	MADISON PAUL PUBLIC HEALTH	10:50-11:05 VICKIE RUSSELL
							11:10-11:25 MAKINI HOPKINS
11:15-11:35	MOLLY SAUNDERS ENGLISH	STEFANIE DONHAM, ET AL EDUCATION	NICOLE MAKELY ASTROPHYSICS	CHARLOTTE KUBICZ GERMAN STUDIES	YITIAN ZHOU BIOLOGY	AMBER TURNER HUMAN RIGHTS	11:30-11:45 KATHERINE CURTISS
							11:50-12:05 CAITLYN DONOVAN
11:40-12:00	ELLE O'BRIEN ENGLISH	GABRIELLA GLYMIN, ET AL EDUCATION	KELLY DOMINO ESS	KAIJA LAZDA GERMAN STUDIES	MAGGIE ADUDELL BIOLOGY	SABRINA LOPEZ RELIGIOUS STUDIES	
12:00-1:20	SCOTTIE MATH BOWL						



SCHEDULE OF PRESENTATIONS

PRESENTATION TIME	BSC 102W	BSC 103W	BSC 112W	BSC 210E	BSC 304E	BSC 308 (SOC/ANT 391)
1:30-1:50	KATE WHITNEY CWS	KAITLYN McCUNE CLASSICS	CLAIRE CUSACK, ET AL PSYCHOLOGY	ERIN LUIPPOLD, ET AL BIOLOGY	LYDIA DICKERSON, ET AL RELIGIOUS STUDIES	1:25-1:40 TAWANA NICHOLAS
						1:40-1:55 PORTIA NEAT
1:55-2:15	KATE WHITNEY, ET AL CWS	KATE SCHULEIN CLASSICS	RACHAEL HORNBOSTEL PSYCHOLOGY	MAGGIE ADUPELL BIOLOGY	TERRINAE WATSON RELIGIOUS STUDIES	2:00-2:15 ANNA WYATT
2:20-2:40	KATHERINE CURTISS SOCIOLOGY/ ANTHROPOLOGY	YUAN YUAN HISTORY	KRISTEN TURNER NEUROSCIENCE	MERRILL MONTGOMERY BIOLOGY	ACHANE MADDEN, ET AL RELIGIOUS STUDIES	2:20-2:35 SYEDAH ASGHAR
						2:40-2:55 JORDAN STEELE
2:45-3:05	SU MYAT THU SOCIOLOGY/ ANTHROPOLOGY	ANNA WILLIAMS HISTORY	YUN JIANG, ET AL PSYCHOLOGY	QUYEN TRAN, ET AL OIE/BIOLOGY	DANLI LAN RELIGIOUS STUDIES	3:00-3:15 NICOLE HOLBROOK
3:10-3:30	MEGAN MITCHELL SOCIOLOGY	KRISTINA LAMOTHE, ET AL HISTORY	ELIZABETH ADAMS PSYCHOLOGY	MARIAH CAWTHORNE, ET AL ALTERNATIVE SPRING BREAK	HEATHER WILLIAMS, ET AL RELIGIOUS STUDIES	3:20-3:35 ELLEN NUNLEY
3:35-3:55	ASHLEIGH OGUAGHA AFRICANA STUDIES	KIEGAN MONTGOMERY HISTORY	SIJIA LI, ET AL PSYCHOLOGY			3:40-3:55 KIMBERLY REEVES



PRESENTATIONS 9:00-9:15

BSC 308

IMPACT OF ACHIEVEMENT INCONGRUITIES ON ELEMENTARY STUDENTS IN GEORGIA PROJECT

AUTHOR: CORI BRADWELL-COAXUM

ADVISOR: PROFESSOR MARTHA REES

School districts allocation of resources can vary, however, historically intra-district inconsistencies in achievement and resource allocation have often been ignored. A Critical theoretical approach will shed light on a population of American students who have unequal access to opportunities and resources. My specific research question is, "Are there incongruities among elementary students academic performances within the Fulton County School District, specifically between African American and White students?" The purpose of this study is to determine if elementary students 1) geographic location, 2) race, 3) SES, and 4) school resources impact their ability to achieve academic success. My hypothesis is that the above-mentioned students are being adversely impacted. I will conduct interviews using the snowball method. My goal is to conclude with recommendations for possible reduction in achievement disparities.



PRESENTATIONS 9:00-9:20

BSC 102W

THE GROTESQUE AND POST-APOCALYPTIC SOUTH

AUTHOR: CHRISTEN THOMPSON

ADVISOR: PROFESSOR NICOLE STAMANT

In 1928, Ellen Glasgow wrote that the south was plagued with a "bitter nostalgia. From this homesickness for the past there flowered a mournful literature of commemoration." This nostalgia is seen through decay in southern life and detrimental consumerism in fiction by William Faulkner and Flannery O'Connor, concepts that extend Glasgow's definition to the present. Such assertions about decay continue to capture American cultural imaginations; within the past decade, as writers emerge from a series of culturally stagnant decades driven by consumerism and a nostalgia for "the American Dream," a variety of post-apocalyptic stories in popular culture expand the concerns with identity Faulkner and O'Connor faced in the first half of the twentieth century. This presentation will explore the way the classic Southern Gothic has evolved into a hyperbolic grotesque interpretation of fears of the Southern community, including television such as *The Walking Dead*, and *The Vampire Diaries*.

BSC 103W

STRATEGIC PLANNING FOR THE HAPPIEST PLACE ON EARTH

AUTHOR: BRITTANY NORRIS

ADVISOR: PROFESSOR TOM WILL

This presentation aims to investigate the strategic planning involved in Disney's theme parks around the world. Using the information gathered through my research I will discuss the Disney's current capabilities in the previously stated endeavors and give my own strategic ideas for the future. My findings show that

Disney guests limit their visits due to the fact that they expect to see the same attractions at every visit and retention numbers are not at the optimal level due to a drop-off in interest from males after the age of 10, and all guests between the ages of 14 and mid-thirties (when they begin to bring their own children to Disney). I will discuss the possibilities of more international parks and the creation of more "boy-friendly" shows and attractions in order to increase the number of visiting guests.

BSC 112W

THE EFFECT OF TETHERING ON THE GLASS TRANSITION TEMPERATURE IN THIN POLYMER FILMS

AUTHOR: CHRISTINE FRANZEL

ADVISOR: DR. BÜLENT AKGÜN, NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY/UNIVERSITY OF MARYLAND

For polymers, the glass transition temperature (T_g) is the temperature at which the material shifts from a brittle, glassy state to a soft, rubbery state. When polymer chains are confined, the T_g may deviate from that of the polymer in bulk. Polymer brushes represent one type of confining architecture in which chains are grafted at one end to a surface. As polymer brushes are potentially applicable in fields such as microelectronics, biomaterials, and drug delivery, T_g behavior of these materials represents an important point of interest in polymer science. However, inconsistencies in the literature show differing T_g trends with changes in brush properties such as thickness.

In this project, the T_g 's of 12 nm, 20 nm, 31 nm, and 67 nm polystyrene brushes at high grafting density (~0.5 chains/nm) are measured using x-ray reflectivity. Results are compared to those found in the literature for sparsely grafted chains and ungrafted chains.

BSC 209W

ACCUULTURATION OF MUSICAL FLUENCY AND NURSERY SONGS

AUTHOR: ANDREA LOVE

ADVISOR: PROFESSOR TRACEY LAIRD

How is it that even without musical training the average person can sing along to the radio and anticipate what comes next in a song? How does one know when a musician hits a wrong note? "Musical fluency," like fluency in one's native language, is acquired through acculturation rather than directed study. Musical fluency implies more than the ability to read music; rather, it's an understanding and implicit knowledge of what's correct and incorrect, and what has meaning and coherency in our musical culture. Nursery songs are a primary genre we hear from infancy and, therefore, deeply inform our acquisition of musical fluency. The components of nursery song are ideal for teaching us, in Western culture, about tonal diatonic music, rhythms, structure, prosody, and emotional gestural content, which not only helps us understand the popular and traditional music around us, but prosody and gesture vital to all forms of communication.

BSC 210E

GEOMETRY IN HIDDEN PLACES

**AUTHORS: HILARY TOBIASZ, GABRIELLE O'BRIEN, JORDAN KENNEDY,
SHANNON MCCARTHA
ADVISOR: PROFESSOR MYRTLE LEWIN**

Students in MAT 314 (Modern Geometries) in Fall 2011 completed exploratory projects using Geometer's Sketchpad. We'll share with you some of the work we did, looking for the mathematics behind some of our favorite places and hobbies, and looking for (hidden) visual patterns in some theorems. Come see, through the eyes of mathematics students, destinations such as Barnsley Gardens in Georgia and the Portico of Attalos in Agora, patterns hidden in a proof, as well as some imagined castles using three dimensional paper cuttings.

BSC 304E

PRELIMINARY RESULTS FROM AGNES SCOTT COLLEGE (ASC) STRESS AND DEPRESSION SURVEY (SDS)

**AUTHORS: ALEX AMBROSE, KATHERINE T. WILSON
ADVISOR: PROFESSOR MATT MAGEE**

Background: Recent studies suggest that the prevalence of depression is increasing among college students. Depression is an important predictor of poor academic performance. Little research has been done to evaluate the prevalence of depression in women's colleges. Objectives: To determine the prevalence of depression and stress at ASC using the Center for Epidemiologic Studies Depression Scale (CES-D). Our secondary aim was to estimate the association between CES-D and factors including class schedule, exercise, and perception of campus resources. Methods: Between March and April 2012, we administered an anonymous 20-minute on-line quantitative mental health questionnaire to ASC students. Descriptive statistics and univariate associations were analyzed using SPSS and SAS software. Results and Conclusions: We will discuss preliminary survey results and the project's public health implications for the ASC and broader college community.

**PRESENTATIONS 9:20-9:35**

BSC 308

MINORITIES IN SPECIAL EDUCATION

**AUTHOR: DESTANI PARKER
ADVISOR: PROFESSOR MARTHA REES**

There is an overrepresentation of minority students in special education programs compared to their white peers. This research is to seek out answers as to why these disproportionate numbers exist. This topic is very important because every student deserves to have a fair and quality education. Also if there is a flaw in the system, this research will expose it in the final results. Research methods for this project include: surveys, interviews, and a literature review. The approach taken with this research distinctively sets it apart from previous research because it looks at this issue from the inside out. The interviews conducted are with

individuals who have everyday contact with these students versus studying statistics. The results now are currently pending.



PRESENTATIONS 9:25-9:45

BSC 102W

STUDENT EXPERIENCES IN THE STORYTELLING THEME HOUSE

AUTHORS: LISA MIELKE, KEELY LEWIS, KATHRYN ASKEW, ERIN LEMONS, LEAH KOTLARCHYK, AND CASEY BAILEY
ADVISOR: PROFESSOR AMBER DERMONT

This presentation will discuss the Storytelling Theme House's initial goals, both for its members and for the Agnes Scott community. Each participant will explain how she chose to share her passion for storytelling with the community through her individual projects and house activities. Members will also tell how living in the theme house has helped them understand what storytelling is and how it affects their daily lives. The presentation will conclude by describing the community events the Storytelling Theme House hosted throughout the year.

BSC 103W

CHRISTIANITY AND CAPITALISM: THE ROOT OF HUMAN RIGHTS POLICY

AUTHOR: RACHEL BURGER
ADVISOR: PROFESSOR CATHERINE SCOTT

In the past two decades, human rights' role in America's approach to China has become a focus within foreign policy. However, to date there has yet to be an exploration of the post-anticommunist Christian proselytization role in human rights policy when approaching Sino-American relations. This presentation and paper aim to prove that the American vision of world order is a product of this matrix, and will apply this theory to Sino-American relations

BSC 112W

PROBING THE LOOP ON METALLO- β -LACTAMASE L1, AND THE SEARCH FOR A WIDE-SPECTRUM ENZYME INHIBITOR

AUTHORS: ALTHEA GUNTHER, MAHESH AITHA, JOE DOWLING
ADVISOR: DR. MICHAEL CROWDER

Soon after the introduction of antibiotics, bacteria began gaining resistance against the drugs. L1 is a B3 enzyme in the class B β -lactamases, which hydrolyze the amide bond in antibiotics. L1 has a loop whose function is still under determination. In an effort to characterize the role of the loop, EPR studies will be done on CoZn L1 SL that has been overexpressed, isolated and stored for use. Due to the lack of similarity among β -lactamases, a common inhibitor is not available. To address the need for an inhibitor that is effective against a large variety of enzymes, inhibitor studies will be done on several metallo- β -lactamases with an assortment of inhibitors. To this end, the enzymes L1, CcrA, Bla2, ImiS, and VanX have been successfully overexpressed and purified.

BSC 209W

MISE-EN-ABYME AND MONUMENTALITY: THE HIERARCHY OF IMPORTANCE IN THE TOMBS OF VALOIS BURGUNDIAN DUKES

AUTHOR: LOLA CLAIRMONT
ADVISOR: PROFESSOR DONNA SADLER

This art historical analysis discusses the hierarchy of depicted figures on the tombs of the Valois Burgundian dukes and duchess, specifically the tombs of Philip the Bold, John the Fearless, and Margaret of Bavaria.

Architecture and microarchitecture cast the viewer and the *pleurants*, small movable statues, into a spiraling power dynamic through the use of *mise-en-abyme*, which can be defined as infinitely reoccurring images. In conjunction with *mise-en-abyme*, I will apply François Bucher's theory that microarchitecture was used to symbolize the kingdom of heaven in Gothic art. The viewer's performance and hierarchy of scale will also be discussed.

In my argument, I conclude that *mise-en-abyme*, hierarchy of scale, and the theory of microarchitecture as representative of the kingdom of heaven places the importance on the recumbent figure, thus reinforcing the recumbent figure's authority over *pleurants*, viewers, and the kingdom of heaven.

BSC 210E

PERIODICITY OF THIRD-ORDER LINEAR RECURRENCE SEQUENCES

AUTHOR: SHAN SHAN
ADVISOR: PROFESSOR ALAN KOCH

In 2011, Franzel '13, Psalmond '11, and Tobiasz '12 provided a necessary and sufficient condition for a number k to be the period length of an integer sequence described by a second-order recurrence relation modulo a prime p . Here, we extend their techniques to sequences described by third-order recurrence relations. We show that any such sequence modulo p has period length dividing $p^3 - 1$, $p^2 - 1$ or $p(p - 1)$. Conversely, any divisor of these three numbers can be realized as a period length for some such sequence.

BSC 304E

RELATING ACADEMICS TO STRESS & ANXIETY IN AGNES SCOTT STUDENTS

AUTHORS: DESTINY DAVIS, ANTONIKA SOUDER
ADVISOR: MATT MAGEE

Stress and anxiety is a health concern in the lives of college students. The purpose of this research is to identify the risk factors that contribute to stress & anxiety in students at Agnes Scott College; specifically, this presentation will focus on stress & anxiety and its association with students' academic major and course load. We hypothesize that students with demanding science and mathematics related majors or heavy course loads will report having higher levels of stress and anxiety. We obtained student data on academic schedule and major using an online survey service and assessed levels of stress and anxiety using the Depression Anxiety Stress Scale (DASS-21) as well as the Center for Epidemiologic Studies Depression Scale (CES-D). Associations and statistical information were calculated using Microsoft Excel. Our

presentation will discuss survey results as well as analyze the association between stress & anxiety and students' majors/course load.



PRESENTATIONS 9:40-9:55

BSC 308

“I QUIT MY DAY JOB”: REFLECTIONS AND ANALYSIS OF THE EXPERIENCE OF CAREER CHANGERS WHO BECAME TEACHERS

AUTHOR: VIERGELINE FELIX

ADVISOR: PROFESSOR MARTHA REES

Second career teachers are a recent and growing phenomenon in American education. They leave careers as stockbrokers, engineers, and lawyers to pursue the field of education. Yet what causes or pushes individuals to leave such jobs to become teachers in low-income and low-performing schools? This presentation examines the motivations and experiences of four career changers who range from backgrounds in business, science, law, and public service, and it reveals the obstacles, and factors that bring second career changers into the field of education, but also highlights the unique qualities and possibilities that they bring to the field of education and the classroom. Because student achievement is linked to teacher success and performance, I will conclude by showcasing the endless possibilities that arise out of having career changers in the classroom.



PRESENTATIONS 9:50-10:10

BSC 102W

A SHORT STORY READING

AUTHOR: MARIAN MAY KAUFMAN

ADVISOR: PROFESSOR AMBER DERMONT

This presentation will be a culmination of my development as English-Creative Writing major. When I first came to Agnes Scott my primary discipline was poetry but under the instruction of Dr. Amber Dermont I began to explore fiction. Therefore, in my Creative Writing Senior Seminar with Dr. Dermont I developed a short story collection that was a continuation, in terms of theme, of a poetry collection I produced under the visiting writer Natasha Trethewey. The short story collection became an investigation of voice, characterization, language and the relationship between poetry and prose in the short story form. My stories investigate largely the maternal bond but also greater themes of the ties that bind two people, and how these ties and inheritance inform individual identity. Throughout my creative writing classes I have explored characters with dark secrets and desires, giving life, destruction, lightness and darkness to my fiction.

BSC 103W

WELCOME TO THE FORBIDDEN CITY: DECIPHERING LIBERAL NEWSPAPERS IN CHINA

AUTHOR: LAN MEI

ADVISOR: CATHERINE SCOTT

As a Hubert Scholar for Public Service in 2011, I joined the international news department at *Southern Weekly*, described by *The New York Times* as the most influential liberal newspaper in China. The internship, and the succeeding special contributor, experiences, gave me a precious chance to explore the behind-the-cover operating mechanism of liberal newspapers in China.

Started from interpreting the index of press freedom and Chinese official media policy, my presentation will try to decipher the strategies employed by Chinese liberal newspapers in dealing with media censorship and beyond. Through content analysis, I will use an international feature story piece in examining the art of titles, reporting perspectives, choices of raw material, detail processing and rhetorics mastered by Chinese liberal newspapers under censorship.

BSC 112W

NFYA-1 TRANSCRIPTION FACTOR - A SUBSTRATE FOR ERK MAP KINASE IN *C. ELEGANS*

AUTHORS: QUYEN TRAN, KATHERINE WILSON

ADVISOR: PROFESSOR DOUG FANTZ

The transcription factors NFYA-1, NFYB-1, and NFYC-1 form a complex that bind to the CCAAT-box sequence in *C. elegans*. This group of proteins represents putative downstream targets of the Ras signaling pathway extracellular-signal regulated kinase (ERK) MAP kinase, which regulates cell division. Gel-shift binding assays were used to determine the interaction between the three NF-Y proteins and a labeled CCAAT-box-containing DNA probe, with and without the effect of protein phosphorylation. Our results indicate that NFYA-1 alone non-specifically binds to DNA. Further, phosphorylation is observed to inhibit the NF-Y proteins' binding to DNA. ERK MAP kinase assays were used to assess ERK MAP kinase affinity with the individual NF-Y proteins and the NFY complex. Our results indicate that NFYA-1 alone is a substrate for ERK MAP kinase but has a lower affinity than the NF-Y complex. Thus, the NF-Y complex is a target of the Ras signaling pathway through NFYA-1.

BSC 209W

I AM WOMAN THEME HOUSE

AUTHORS: ANJANE WILLIAMS, BRITTANY WILLIAMS, JESSICA RESNAK, EBONY BLACK, ALEXANDRA HOLLIDAY

ADVISOR: JAMENDA WHITEHEAD

The purpose of the *I am WOMAN* theme house is to encourage the women of Agnes Scott to love themselves as individuals while embracing their differences as a community. Our goal includes encouraging women to: love the skin they're in, relieve stress through a positive and healthy medium, remain aware of how contemporary social issues affect how we view others and ourselves, and to never stop exploring the three facets of our being: mind, body, and spirit. The approach we took in achieving this goal was hosting several events over the course of the year pertaining to our theme. The theme houses give students the opportunity to enhance their educational experience while involving the student body. The *I am WOMAN* theme house was able to bring about a unique combination of events that expanded the mind of the inhabitants as well as the Agnes Scott community.

BSC 210E

THE EFFECT OF LIFE EXPECTANCY ON THE REPRODUCTIVE RATES OF SEQUENTIAL HERMAPHRODITES

AUTHOR: JORDAN KENNEDY

ADVISORS: PROFESSORS ALAN KOCH AND LOCK ROGERS

Recent research by Dr. Rogers and Dr. Koch has shown that individual condition affects the pattern of sex allocation and the allocation of reproductive effort in a sequential hermaphrodite. However, many of the variables depend on life expectancy. The behavior of these variables was illustrated using specific values for life expectancy to model low-, average-, and high-condition individuals. Life expectancy varies from individual to individual, and can thus be considered as a continuous random variable. This presentation explores the effects of life expectancy on the total number of offspring throughout an individual's life and the ratio of male versus female reproductive rates.

BSC 304E

AN EXAMINATION OF COLLEGE STUDENTS' PERSONAL FINANCES AND STRESS/ANXIETY LEVELS

AUTHOR: DINA JONES

ADVISOR: MATTHEW MAGEE, MPH

Background: As the economy has worsened throughout the world, there has been an increase in the levels of stress/ anxiety amongst college students. Although, this has been demonstrated in various studies, there is limited research on the connection between mental health and personal finances among college students. Objectives: To examine the association between personal finance indicators with stress/anxiety among ASC students.

Methods: Throughout March and April 2012, we administered an anonymous 20-minute on-line quantitative mental health survey to the ASC community. Financial indicators like financial aid, employment, and dependent status were self-reported by participants. Stress/anxiety was measured using the Depression Anxiety Stress Scale (DASS-21). Excel and Fathom software were used for all data analysis.

Results and Conclusions: We will review the preliminary survey results and compare them to findings in studies that utilized DASS-21 to examine stress /anxiety among college students.



PRESENTATIONS 10:00-10:15

BSC 308

PROFESSORS AWARENESS ON THE HIGH PRICES OF TEXTBOOKS

AUTHOR: RICHELLE MOORE

ADVISOR: MARTHA REES

Professors sometimes have a choice when choosing certain textbooks for their courses. The research question for this paper is if professors take the cost take the cost of textbooks into account when choosing texts for their courses.

This paper reports the results of the survey taken by the students of Agnes Scott College and the results of the interviews done by the professors of Agnes Scott College. This paper also explains what other researchers have talked about with this topic through Literature review. The results that I have found are that professors do take the cost of textbooks into account when they choose textbooks. But sometimes they have no control over the price, especially if it depends on which department they teach in.

10:10-10:50

POSTERS, EXHIBITS AND REFRESHMENTS

WOOLFORD B. BAKER ATRIUM, BULLOCK SCIENCE CENTER

See poster abstracts beginning on page 33.



PRESENTATIONS 10:50-11:05

BSC 308

ON-SITE CHILDCARE ON SMALL COLLEGE CAMPUSES

VICKIE L. RUSSELL
ADVISOR: MARTHA REES

More and more women are returning to college after the traditional age and with established families. This study explores whether students, staff, and faculty who attend or work at a small, liberal arts colleges and who are also parents express a need for on-site childcare on their campuses. To investigate this issue, I will distribute questionnaires and conduct interviews with students, staff, and faculty who have children under age six. I hope to learn more about students', staffs', and faculties' daily routines to determine if on-site childcare would facilitate their dual roles as parents and students.



PRESENTATIONS 10:50-11:10

BSC 102W

SITA IN THE *RAMAYANA*: FEMALE EMPOWERMENT THROUGH TRIAL BY FIRE

AUTHOR: BHUMIKA PATEL
ADVISOR: WAQAS KHWAJA

This presentation is about Sita's empowerment in the Hindu epic poem, the *Ramayana* by Valmiki. This presentation argues that when read from a feminist lens, Sita, the main female character of the text, transforms from a subservient woman to an independent woman who stands up against injustice done to her by her husband, Rama. Sita's imprisonment by the demon ruler, Ravana, away from all that she knows,

allows her to develop into an independent character who resists Ravana's advances and who later fights against Rama's unjust accusations about her purity. This presentation will focus on the trial by fire, *agni pariksha*, which Sita undergoes to prove her purity to Rama, and how this event shows the reader her independence, Rama's flaws, and also acts as a turning point in the relationship between Sita and Rama.

BSC 103W

CHINA VS. KOREA: THE SUI AND TANG DYNASTY WARS AGAINST KOGURUYO

AUTHOR: LISA MIELKE

ADVISOR: PROFESSOR ANNE BEIDLER

Despite East Asia's rapid rise in political and economic importance, there is relatively little Western scholarship on its long, rich and well-documented history. This study examines the political effects of one of the first major conflicts between the kingdoms that would become today's China and Korea: the military campaigns of the Sui and Tang Dynasties throughout the seventh century against the kingdom of Koguruyo in what is now North Korea. Special attention is paid to the extent to which the massive expenditures of money, resources and life required of these campaigns influenced the fall of the Sui Dynasty – only one example among several of how interactions between these two countries shaped their histories.

BSC 112W

WAVELET ANALYSIS AND DENOISING

AUTHOR: CHARLA GRUBER

ADVISORS: PROFESSORS CHRIS DEPREE AND ALISON MERCER (GTRI)

In my senior research project I am using wavelet transforms in the analysis of astronomical data. A sound wave can be Fourier transformed to reveal the frequencies that make up the sound. In the same way, a 2-dimensional image can be Fourier transformed to reveal details in the image. A wavelet transform is like a Fourier transform, only it does a better job handling functions with discontinuities or sharp peaks. A wavelet transform is a representation of a function that shows hidden information that may not otherwise be easily detectable in the raw data. The particular analysis I will be doing is denoising. I will denoise a test image first to show the methods and then I will denoise a data set of the exoplanetary transits that Nikki Makely ('12) has reduced in her astrophysics research in order to show the usefulness of this method in astronomical data reduction. In my research, I have used computer code in Wolfram Mathematica, to transform data into a form more suitable for data analysis. In my presentation, I will give a brief mathematical overview of Fourier and wavelet transforms, and then explain their use in the processing of noise reduction in data.

BSC 209W

THE PLEASURE OF SAD MUSIC: EMOTIONAL, SITUATIONAL, AND NEUROLOGICAL FACTORS

AUTHOR: ANNALEE CRAIGMILE

ADVISOR: TRACEY LAIRD

Sad music gives us an emotional release that we cannot experience in any other way in our daily lives. As the popularity of Adele's "Someone Like You" demonstrates, people seek out sad songs because they are a fulfilling, yet socially acceptable medium for accessing emotions. The emotions sparked by listening to music mimic those we feel from real life experiences, yet end after a finite period of time. These are "aesthetic emotions," a unique vehicle for cathartic experiences. Unlike real-life "situational emotions," which have no defined end-point, "aesthetic emotions" are framed by a musical encounter. When the encounter ends, we continue our normal lives, feeling the benefits of the emotional release. In other words, aesthetic emotions benefit us by allowing entry into deep neurological affective structures without actually experiencing the pain or sorrow that stimulate them in real life.

BSC 210E

TESTING FOR DIFFERENTIAL SEX-SPECIFIC PLANKTON RESIDENCIES IN THE BLUEHEAD WRASSE, *THALASSOMA BIFASCIATUM*

AUTHOR: KELLY SMITH

ADVISOR: PROFESSOR LOCK ROGERS

In marine ecosystems, many fish begin life as free-floating plankton. While drifting as plankton, fish larvae listen for sounds associated with coral reefs. When they hear a reef, they swim down, burying themselves in the sand to metamorphosize into tiny versions of adults. Regarding this evolutionary behavior we want to know if males emerge faster than females. We apply this theory to *Thalassoma bifasciatum*, the bluehead wrasse, a common species of fish found on shallow coral reefs of the Caribbean. Individuals were sexed in the field and taken back to the lab for further examination. We also want to address the question of why males are less common on small reefs than they are on large reefs? We know that on small reefs small males have low reproductive rates and perhaps they are avoiding settling on small reefs. If so, we predict that males will spend more time in the plankton as they wait to find a large reef. We can measure time-in-the-plankton by counting daily growth rings on an individual's otoliths, (the individual's ear bones). We found that there was no difference between males and females. These results reject our hypothesis.

BSC 304E

METHAMPHETAMINE ABUSE IN THE UNITED STATES: EFFECTS OF PRENATAL METHAMPHETAMINE EXPOSURE ON THE GROWING FETUS

AUTHOR: MADISON PAUL

ADVISOR: KERI NORRIS

Methamphetamine is a commonly abused stimulant both in the United States and abroad. Prenatal methamphetamine use has a plethora of side effects and is detrimental to both the mother and the growing fetus. Methamphetamine's effects on the growing fetus include small birth size, premature birth, impaired muscle development, impaired mental capacity, cleft palate, placental abruption, fetal death as well an increased possibility of developing iron deficiency and type 2 diabetes during adulthood. The exact data

on fetal exposure is unknown, however it is known that methamphetamine was the highest abused drug among women mandated by child welfare system to attend rehabilitation services. Additionally, 70% of all child welfare cases in certain areas of California are methamphetamine related. This presentation will explore the social implications of methamphetamine use and the medical implications on the growing fetus.



PRESENTATIONS 11:10-11:25

BSC 308

ADDRESSING THE NEEDS, CONCERNS, AND MOTIVATIONS OF NON-TRADITIONAL WOMEN STUDENTS

AUTHOR: MAKINI HOPKINS
ADVISOR: MARTHA REES

In American society today many women are returning to college. Studies that emphasize return to college students tend to group male and female student populations and analyze why they return in terms of a macrolevel perspective. This paper seeks to gain the unique perspective of women who have chosen to return to college and through their lens enlighten the institutions that seek to serve and educate them. The research method consists of randomly selected non-traditional women students via surveys and interviews to increase understanding of this specific group from a microlevel perspective. I expect to find that non-traditional women students have unique needs, concerns and motivations for returning to college as compared with traditional students or their non-traditional male counterparts; and to ensure their success (matriculation), the institutions that serve them should be attentive in addressing those specifically.



PRESENTATIONS 11:15-11:35

BSC 102W

EVERYTHING IS A STORY: THE POWER OF STORYTELLING GIRLS IN VICTORIAN AND EDWARDIAN CHILDREN'S LITERATURE

AUTHOR: MOLLY SAUNDERS
ADVISOR: PROFESSOR CHRISTINE COZZENS

This presentation will investigate the implications of the "storytelling girl" trope in children's literature, placing its origin in Victorian and Edwardian novels like Lewis Carroll's *Alice's Adventures in Wonderland*, Francis Hodgson Burnett's *A Little Princess*, and J.M. Barrie's *Peter and Wendy*. The young girl protagonists of these novels are frustrated by their limited agency in a small and limiting world and find an alternate route to power and influence through storytelling. These "stories" take the form of soliloquies, games of pretend, literal bed-time stories, and performances of creative work. Through storytelling, Alice, Sara, and Wendy subvert and question the mores of their world, fashion alternate worlds in which they have authority, and then transfer that sense of agency and empowerment to the real worlds of their novels.

BSC 103W

VENTURING INTO DIGITAL NARRATIVE: THE “HEAR A STORY, TELL A STORY, TEACH A STORY” PROJECT

AUTHORS: STEFANIE DONHAM, SUSANA MARTINEZ, LAURA GARCIA, LINDSEY GOMES, TERESA CHIOFALO, DANIELLE ADAMSON, LELAV AMEDI
ADVISOR: PROFESSOR TOBY EMERT

In this research initiative, English as second language students encountered opportunities to engage with literacy-based skill sets through an innovative teaching and learning intervention. The goal of the project was to provide high-interest, high-skill instruction and to gather information about the students' experiences with the instruction. Additionally, the students practiced their spoken and written English in an authentic setting, specifically designed to provide personal and academic support. Using a multi-modal approach, students in EDU 325, under the direction of their professor, taught learners about narrative forms, literary tropes, language structures, and digital technologies as they assisted them in creating short film projects that convey a theme, message, or “truth” to an audience of viewers. This presentation offers a glimpse into this project.

BSC 112W

REDUCING EXOPLANETARY TRANSIT DATA AND USING EBOP TO DETERMINE THEIR PARAMETERS

AUTHOR: NICOLE MAKELY
ADVISOR: PROFESSOR CHRIS DEPREE

Using both the SARA-North and SARA-South telescopes located respectively in La Serena, Chile and Kitt Peak, Arizona, I have systematized the exoplanetary observation and data reduction process using MaxIm-DL as the data reduction software. From this resulted a step by step data reduction guide with preferences including combination choices, calibration procedures and error calculations, for student research assistants. Using this data reduction procedure not only enables students to easily and effectively reduce observed transits but allows an accurate as possible light curve allowing for a transit to be considered open (unobserved but still suspected), closed (observed and deductively unconfirmed) or transited (observed transit). From the precise photometric data, physical parameters such as limb darkening coefficient, radii, inclination and temperature of the system can be determined using John Southworth's modifications to Paul B. Etzel's Eclipsing Binary Orbit Program (EBOP) which will also be included within the data reduction guide.

BSC 209W

CREATING THE “FEMME FATALE”: MARLENE DIETRICH AS OBJECT OF THE GAZE

AUTHOR: CHARLOTTE KUBICZ
ADVISOR: PROFESSOR GUNDOLF GRAML

The modern medium of cinema was undoubtedly influential in both communicating ideas and creating ideals since the 1920s and the 30s. This happened on an international scale, moving images and ideas across borders, figuring at the same time this transnational reality. I am interested in observing the phenomenon of stardom and especially interested in looking at Marlene Dietrich as German movie star but

also Hollywood icon. In this presentation I will use the films “The Blue Angel” and “Shanghai Express” as primary sources to analyze how the figure of Marlene is constructed on a narrative level and a technical level. Works such as Laura Mulvey’s “Visual Pleasures” and Elizabeth Bronfen’s “Seductive Departures of Marlene Dietrich: Exile and Stardom in “The Blue Angel” will substantiate this discussion of the rapport between audience and image and the creation of an object of desire. The goal of this paper is to shed light on the incarnation of the femme fatale and the mechanisms of its creation.

BSC 210E

DEVELOPMENT OF A LOOP-MEDIATED ISOTHERMAL AMPLIFICATION METHOD FOR DIAGNOSING OPPORTUNISTIC FUNGAL DISEASES

AUTHOR: YITIAN ZHOU
ADVISOR: PROFESSOR TIM FINCO

Fast and cost-effective detection assays for opportunistic fungal diseases are in high demand in third world countries where immuno-compromised patients are at risk. The current study is devoted to developing detection assays for *Histoplasma capsulatum* and *Pneumocystis jirovecii* with Loop-mediated isothermal amplification technique. The assay will need little skill-specific procedure or expensive equipment upon its completion. HSP60 sequences and 100KD protein sequences on *Histoplasma capsulatum* were examined as target sequences. The LAMP primer set designed based on HSP60 has little specificity due to high conservation among a number of organisms. The LAMP primer set (ID24) designed based on the 100KD protein gene has robust performance so far on laboratory DNA samples and will proceed to clinical tests in further studies.

BSC 304E

IMMIGRATION LAW AND HUMAN RIGHTS: INTERNING FOR KRAMER & ALFANO PC

AUTHOR: AMBER TURNER
ADVISOR: PROFESSOR TINA PIPPIN

In this proposal I will focus on immigration law in Georgia through my experience interning at Kramer & Alfano PC, an immigration law firm in Decatur. The information presented will be based on interviews conducted with attorneys in the office, in addition to academic and news articles. I will first introduce immigration law by outlining the major types of cases a lawyer can face. I will then introduce the internship site by providing information about the attorneys who work there and the type of immigration law they practice. This will lead to a larger discussion of human rights and how it ties in specifically to the cases taken on by attorneys at Kramer & Alfano. In particular, I will discuss an asylum case that is currently in court proceedings about a male-to-female transgender client who is claiming she would be harmed if she had to return to Honduras.



PRESENTATIONS 11:30-11:45

BSC 308

REPRESENTATION AND TRUST: WHO CAN AGNES SCOTT STUDENTS TALK TO ABOUT HIV/AIDS?

AUTHOR: KATHERINE CURTISS

ADVISOR: PROFESSOR MARTHA REES

The media's various depictions of the HIV/AIDS virus have shaped both current and past generations' cultural perceptions of the viral epidemic since its appearance in the early 1980s. This project uses both quantitative and qualitative data to conclude whether students at Agnes Scott College believe whether their cultural/socioeconomic and gender identity have been properly represented within the HIV information that they have received from the media, as well as from other forms of health communication (on-campus organizations, outside prevention organizations, and support groups).

Whether the media's power in successfully teaching HIV/AIDS awareness and prevention, has altered Agnes Scott students' perceptions of the virus/disease, will be analyzed through surveys, focus groups and individual interviews. The results obtained from the collected data will then be used to understand whether these modes of health communication have affected Agnes Scott's students' attitudes towards discussing the HIV/AIDS epidemic in both public and private settings.



PRESENTATIONS 11:40-12:00

BSC 102W

BARDS, BULLETS AND BEER: A LIVE PERFORMANCE OF ORIGINAL IRISH MUSIC

AUTHOR: ELLE O'BRIEN

ADVISOR: PROFESSOR CHRISTINE COZZENS

The rich literary culture of Ireland is not restricted to scholarly domains—in any pub with live music, treasured stories flow as freely as Guinness, and glasses raise in reverence to the memories revisited in song. This presentation will provide a glimpse into the defining characteristics of traditional Irish music: what musical and lyrical qualities epitomize the genre, and how does Irish music fit into the literary canon? A live performance of original Irish music, inspired by pub musicians, jails, farms and cemeteries encountered on the recent Literary Ireland excursion, promises to captivate and entertain!

BSC 103W

LITERACY AND EDUCATION IN GHANA

AUTHORS: GABRIELLA GLYMIN, DANA SHUM

ADVISOR: LESLEY COIA

Literacy and reading levels for young children, particularly those that attend public schools in low-income neighborhoods have long been a concern for educators in the United States and other countries around the world. Ghanaian educators have been faced with the same problem, in a country where educational

opportunities are the only way to break through the economic glass ceiling that separates the rich and the poor.

This was the focus for a Hubert Scholars Internship in Ghana in the summer of 2011, which involved the creation of a literacy program for the children and staff of the Kathy Knowles Children's Library, a library and community center in Osu, a suburb of Accra, Ghana's capital city. The program focused on raising reading levels, teaching critical thinking skills, and teaching them to express themselves creatively and artistically, therefore empowering them to set and achieve goals that will change their lives and the lives of the people around them.

BSC 112W

EVERY DROP COUNTS!: A WATER CONSERVATION PLAN FOR AGNES SCOTT COLLEGE

AUTHOR: KELLY DOMINO

ADVISOR: SUSAN KIDD AND PROFESSOR JOHN PILGER

While many colleges have become models for environmental stewardship by tracking and reducing their carbon emissions, colleges must also focus on an additional global challenge, water scarcity. Agnes Scott College has recognized this need for additional commitments in water conservation and over the last four years we have moved toward developing a Water Conservation Plan. This presentation will show the steps taken in developing the college's commitment to water reduction including Agnes Scott's water footprint, the target goals for water reduction and possible future suggestions for the college. The ASC Water plan encompasses three focus areas: potable water, wastewater and bottled water and will approach water conservation through retrofitting and renovations, behavioral change and innovative projects.

BSC 209W

PRIVATE VS TAXPAYER MONEY: COMPARING THE IMPACT OF THE GERMAN AND AMERICAN SYSTEMS OF CAMPAIGN FUNDING ON DEMOCRACY

AUTHOR: KAIJA LAZDA

ADVISOR: GUNDOLF GRAML

The differences between the German campaign funding system and the United States campaign funding system are significant: The former is taxpayer-funded, while the latter relies heavily on private donations. Surprisingly, there has been little research done comparing the two. Through a comparative approach I will explore each system individually to see how they function and then contrast them. By showing this we can gain a better understanding of the benefits and costs of the Super PACs versus taxpayer money. Using these comparisons we can begin to answer the questions: What is an ideal system? And is this system realistic? This topic is increasingly important as we near the United States Presidential election and campaigning takes off. This is the perfect opportunity to observe, research, and present my findings.

BSC 210E

MONKEYS SEE, MONKEYS PLAY: AN ENVIRONMENTAL ENRICHMENT EVALUATION FOR RHESUS MACAQUES AT YERKES PRIMATE RESEARCH CENTER

AUTHOR: MARGARET A. ADUDELLE

ADVISORS: JAINE PERLMAN, JASON COWAN-BROWN

For captive animals, environmental enrichment is an important form of stimulation that encourages healthy, species-typical behavior. At the Yerkes Primate Research Center, Field Station Division, enrichment play structures are installed in group enclosures and foraging devices are used in single- and paired-animal housing as forms of environmental enrichment. With the recent arrival of a new play structure for a *Rhesus macaque* enclosure, the enrichment quality of the structure was evaluated through observation of animal usage of the equipment inside the enclosure. Foraging devices for single- or paired-housing were also similarly evaluated for enrichment effectiveness. The collected data demonstrates a trend towards increased usage of the new equipment versus the old in the enclosure, and long-term usage of foraging boards versus other foraging devices in the single- and paired-animal housing. Conclusions made will aid in future decisions regarding types of enrichment equipment used for environmental enrichment at the Yerkes Field Station.

BSC 304E

THE FEMINIST BOOKSTORE: PRESSURES, OBSTACLES AND IMPACTS OF THE TECHNOLOGICAL THIRD WAVE

AUTHOR: SABRINA LOPEZ

ADVISOR: PROFESSOR TINA PIPPIN

This presentation will circle around Atlanta's very own feminist bookstore, Charis Books and More including their sister non-profit organization Charis Circle. It will also include references to other feminist bookstores and a brief overview of past and present obstacles Charis and others face as a "minority" of the book selling industry. This presentation will explore the impacts of web based purchases and the growing virtual bookstore of e-books, as well as the technological aspects of what some consider as the internet based third wave.



PRESENTATIONS 11:50-12:05

BSC 308

THE CONSTRUCTION AND MAINTENANCE OF MASCULINITY AMONG ACTIVE HETEROSEXUAL MALE PRACTITIONERS OF SUBMISSIVE SEXUAL FETISHISM

AUTHOR: CAITLYNN DONOVAN

ADVISOR: PROFESSOR MARTHA REES

Gender is a driving force for how various norms are structured, maintained, and understood. Our social understanding of what it means to be male/female or masculine/feminine standardizes individuals' understanding of what they should be and what they should do in order to be accepted by others. Those who go against the norms of their society are typically subjected to attempts at conversion, ridicule from

family or peers, verbal or even physical violence. This study examines a topic that has generally been shelved or considered a negative pathology: how masculinity of males is created and maintained among heterosexual couples that actively engage in sexual practices where the male takes a submissive role. My hope is that my research will lend to a greater, more accepting social understanding of marginalized groups and perhaps even give members of the normative population a safe beginning for exploring their own identity, sexuality, and gender.



PRESENTATIONS 1:20-1:35

BSC 308

SKIN BLEACHING: AN EXPLORATION OF SKIN COLOR “PRIVILEGES”

AUTHOR: TAWANA NICHOLAS

ADVISOR: PROFESSOR MARTHA REES

Many African Americans have criticized the practice of skin lightening because of its potential negative health effects and its association with colonialism and self-imagery. Since African-Americans cannot biologically change their skin color, they are forced to turn to alternatives such as skin bleaching. While there are laws set up against racial discrimination, skin-tone stratification is not taken into account. Therefore, the effect of skin-tone stratification in our society is often overlooked. If we continue to ignore discrimination based on skin color, then we are indirectly saying that white skin is more valued than dark skin.

What privileges or disadvantages, if any, do women report that they perceive are accompanied with lighter or darker skin? I will code as a privilege anything that my interviewees express as POSITIVE (more attention, compliments, beauty, income, job, etc.); and a disadvantage anything with a NEGATIVE connotation (less attractive, salary, etc.)



PRESENTATIONS 1:30-1:50

BSC 102W

AGNES SCOTT LITERACY NARRATIVES

AUTHOR: KATE WHITNEY

ADVISOR: CHRISTINE COZZENS

A literacy narrative is a person's story of how they learned to read, write, and communicate ideas. These narratives contain a wealth of information about educational systems, collaborative learning, and disadvantaged communities. The Digital Archives of Literacy Narratives (DALN) is a publically available online archival system that collects a multitude of stories in order to, create a historical record of the evolution of literacy practices and teachings. This presentation will raise awareness of the DALN's mission and communicate how the Center for Writing and Speaking plans to document literacy narratives from the Agnes Scott Community.

BSC 103W

THE FEMALE WARRIOR IN ANCIENT ROME

AUTHOR: KAITLYN McCUNE

ADVISOR: PROFESSORS MEGAN DRINKWATER AND JAMES ABBOTT

As a notoriously patriarchal society, Rome was also highly militaristic. In addition, gender roles were clearly defined in ancient Rome, and one of the core ideas of masculinity was the association of men with warfare. However, female warrior figures were often present in the art, architecture, literature and mythology of ancient Rome. By studying the notorious Amazons, in general and specifically the Amazon Camilla, the idea that Romans viewed female warriors as primitive and lacking culture is illuminated. This lack of culture that was so alien to Romans can also be seen in a study of female enemies of Rome, such as Zenobia and Boudicca. The emphasis on the primitive qualities of female warriors allowed Romans to explain the contradiction to Roman values these women represented. As such, the representations of female warriors in the sources show that the female warrior inadvertently supported the dominant patriarchal ideas of ancient Rome.

BSC 112W

CONNECTING COLLEGE STUDENTS' GENDER AND MENTAL HEALTH TO IMPOSTOR PHENOMENON FEELINGS

AUTHORS: CLAIRE CUSACK, NADI NUHU

ADVISOR: PROFESSOR JENNIFER HUGHES

The Impostor Phenomenon is when high achieving individuals attributes their successes to external factors. They feel like a fraud in how others perceive them intellectually. Previous research has linked this phenomenon to gender and psychological disorders. This study expands on prior research in determining whether gender, mental health, perfectionism, test anxiety, and low self-esteem are significantly correlated. Participants were recruited using email and flyers to voluntarily complete an online survey. An independent samples *t* test was used to examine gender differences in impostor scores. Women were significantly more likely to report impostor beliefs than men. Pearson's correlations were used to examine relationships between mental health, perfectionism, test anxiety, and low self-esteem and impostor phenomenon. Mental health, perfectionism, and test anxiety were significantly related to impostor beliefs, while low self-esteem was not. If impostor feelings are connected to psychological disorders, it has important implications for improving treatment these individuals receive.

BSC 210E

ANNOTATION OF *D. ERECTA* GENOME

AUTHORS: ERIN LUIPPOLD, SHANNON MCCARTHA, TEZIN WALJI, CHELSEA WALKER

ADVISOR: PROFESSOR SREBRENKA ROBIC

This project focuses on annotating the genome of the fruit fly *D. erecta*. We used computational resources and data supplied by the Genomics Education Partnership (GEP) based out of Washington University in St. Louis. Annotation is the process of identifying and labeling genes and their introns and exons using bioinformatics tools such as BLAST and databases including FlyBase, USC Genome Browser, and Gene Record Finder. The data from this project will be compiled with other segments of annotated *D. erecta* genome and published for use by other research scientists.

NEGOTIATING BLACK MASCULINITIES AMONG AT-RISK ATLANTA YOUTH

AUTHORS: LYDIA DICKERSON, EMILY THOMAS
ADVISOR: TINA PIPPIN

For our presentation, we will be offering a comparative evaluation of our internships at YouthPride Atlanta and the Women's Resource Center safehouse. We will use scholarship and statistical data to augment our first-hand encounters and understandings of the negotiation of black masculinities in these "safe spaces" among at-risk young men and boys in the metropolitan Atlanta area. We will evaluate scholarship on bullying, displacement, gender socialization in the black community and discuss our experiences at our internship sites, providing case studies to demonstrate how these issues manifest in the youth we interact with and the potential social and cultural implications of our findings.



PRESENTATIONS 1:40-1:55

DISCRIMINATION IN CRIMINAL CASES: INTERSECTIONALITY OF RACE, GENDER, AND THE MEDIA

AUTHOR: PORTIA NEAT
ADVISOR: MARTHA REES

This research study examines the combining factors of race and gender stereotypes and the media's influence on jurors' verdicts in criminal cases. Racial and gender stereotypes are unconscious socially learned biases that affect jurors' judgment during trials. In addition, media images cause the "CSI effect," which refers to the conflict among jurors who cannot distinguish between crime drama shows' fictive judicial system and the actual process. Through the research methods, I expect to predict the level of racial biases, gender biases, and fictive expectation of criminal trial. The methods include a literature review, analysis of legal documents, analysis of crime show dramas like Law & Order: SVU, survey research and several interviews of the Agnes Scott students. My research provides an understanding of society's view of the unrealistic expectations of forensic science compared to the possibilities of science and the bias influences from racial and gender stereotypes.



PRESENTATIONS 1:55-2:15

BSC 102W

UNCOVERING THE CONNECTION BETWEEN PEER TUTORING AND STUDENTS' SENSE OF BELONGING IN THE COLLEGE COMMUNITY

AUTHORS: ELIZABETH GUSTOSON-BERKSTRESSER, LAUREN ALBIN, SU MYAT THU, LEAH KUENZI

ADVISOR: PROFESSOR CHRISTINE COZZENS

In peer tutoring sessions, students engage in a collaborative learning process that bridges the gap between their academic and social collegiate lives. This session will interrogate the role of the writing center in enhancing a sense of belonging on campus for both the writer and the tutor.

BSC 103W

LIVIA DRUSILLA, THE IDEAL ROMAN MATRON

AUTHOR: KATE SCHUHLEIN

ADVISOR: PROFESSOR MEGAN DRINKWATER

Through analysis of Roman propaganda commissioned by Augustus, one can determine the proper public portrayal of an ideal Roman matron. Through the south frieze of the *Ara Pacis*, the statue of Livia near the Porta Prima, the statue of Livia, Wife of Augustus, two busts from Gaul and the Iberian peninsula- the Aeminius bust and the Tarraco bust; a bust from Greece- the Buthrotum bust; a bust from Asia Minor- the Ephesus statue; and two busts from Egypt and North Africa- the Arsinoe bust and the Cyrene bust, Augustus demonstrates that his wife, Livia, is an ideal Roman *matrona*. These busts and statues of Livia are a varied sampling of portraiture from the vast Roman Empire and are indicative of artwork from seven regions. A further analysis leads one to compare the similarities and differences of these media and to speculate what might be the causes of such similarities and differences.

BSC 112W

SPRING INTERNSHIP 2012

AUTHOR: RACHAEL HORNBOSTEL

ADVISOR: PROFESSOR LERITA COLEMAN BROWN

My presentation focuses on the importance and benefits of programs that take a holistic approach on providing care to children and on addressing possible trauma experiences in children. One example is Jesse's House, a new program established in 2011 under the United Methodist Children's Home. This program tends to the mind, body, and spirit of elementary and middle school-aged children who have experienced various forms of trauma. Jesse's House uses a multi-generational perspective, the incorporation of individuals of all ages, to aid in the functionality of this program. This perspective allows college students the opportunity to lead the program activities and gain essential hands on experience with a child specific demographic.

OIL BIODEGRADATION: A NEW ERA OF BIOREMEDIATION

AUTHOR: MARGARET A. ADUDELLE

ADVISOR: PROFESSOR SREBRENKA ROBRIC

Over the past few decades, bioremediation technology regarding pollution clean-up has advanced and research now suggests oil biodegradation, or the degradation of oil waste through use of microorganisms, is a method of bioremediation for oil pollution with a promising future. This presentation will discuss the history, current findings, and recent challenges of oil biodegradation research. Crude oil contains several hydrocarbons and polyaromatic hydrocarbons (PAHs) that are toxic to most life forms, with the exception of the hydrocarbonoclastic bacteria (HCBs) that use crude oil as an energy source. These HCBs, such as the bacterium *Alcanivorax borkumensis*, have been studied to investigate the mechanisms behind successful oil biodegradation. Thus far, researchers have found combining standard oil pollution clean-up methods with the harnessed power of HCBs demonstrates increased degradation rates. However, there still exist many questions to be addressed before these studies can be applied to the environment on a large scale.

Keywords: bioremediation, oil biodegradation, PAHs, HCBs, *A. borkumensis*

EVE AND THE DESIRE FOR KNOWLEDGE

AUTHOR: TERRINAE WATSON

ADVISOR: PROFESSOR TINA PIPPIN

I have chosen to take a deeper look at Genesis 3 in order to further understand the actions of "the Fall". On my journey toward interpreting the story of Eve and her role in, "the fall of mankind," I have come to the realization that Eve was not responsible for this myth, an act that she has been wrongfully blamed for since the beginning of monotheistic religions. This idea of "original sin" has been placed upon *the mother of all living* (Gen. 3:20), and with the strength women possess, she bore this blame forever.

I believe that Eve's purpose was to gain the Knowledge of Good and Evil. With the serpent as her guide, she was to further her understanding of the world by partaking of this Knowledge. It was because she shared the knowledge with Adam without being told to do so that caused their disobedience.



PRESENTATIONS 2:00-2:15

SEX TRAFFICKING AND THE FORGOTTEN GENDER

AUTHOR: ANNA H. WYATT

ADVISOR: PROFESSOR MARTHA REES

The purpose of my study is to show how society overlooks males as potential victims in the sex trafficking industry. From societal views, scholarly articles, and actual laws in the United States I will analyze the content and show the discrepancies between male and female consideration as victims. First, for the scholarly articles and laws on this matter I will be conducting a content analysis to show how the author or

state legislature uses female wording rather than gender neutral wording that will make citizens feel that everyone is considered and protected in this matter. Secondly, in order to further understand societal views on the subject matter and what gender people consider to be most affected by the sex trafficking industry I will be distributing a survey to the Agnes Scott student community and also conducting two to three interviews. I will collect fifty to one hundred surveys that will show the demographics of the subject, how educated they are, and the level of their awareness of this growing problem in the United States. The interview will provide a more in depth description of the subject's views of the sex trafficking industry and will allow me to gain an insight into the subject's personal opinions on the matter which the survey does not do.



PRESENTATIONS 2:20-2:35

BSC 308

SEX TRAFFICKING IN THE UNITED STATES: PROOF IT HAPPENS

AUTHORS: SYEDAH ASGHAR, JILL BRENNMAN
ADVISOR: PROFESSOR MARTHA REES

When we hear the term sex trafficking, Americans often fail to recognize it as an issue occurring in their neighborhoods. Jill Brennman is a white American woman who was trafficked when she was a teenager. She escaped an abusive family and was brought to the world of sex trafficking. Years later when the police caught her perpetrator she was left with no source of income, no support system, but had emotional and physical injuries. Through my extended interview with Jill Brennman, my research paper addresses the missing voices and experiences from American women who are trafficked.



PRESENTATIONS 2:20-2:40

BSC 102W

THE MANIFEST AND LATENT FUNCTIONS OF THE SEMIOTICS USED IN WEST AFRICAN HIV/AIDS HEALTH COMMUNICATION AND MEDIA

AUTHOR: KATHERINE CURTISS
ADVISORS: PROFESSORS BRENDA HOKE, YVONNE NEWSOME, DOUGLAS FALEN

The cultural norms and identity of urban and rural populations in the West African countries of Benin, Burkina Faso, Ghana and Nigeria, dictate the type of health communication and media used to modify public behavior and attitude, on the public health issue of HIV/AIDS. Societal factors such as a population's language, literacy rate, educational level and income, are determining factors in whether the implementation of these HIV/AIDS awareness and prevention campaigns will be prove to be effective on a macro level.

The literature used for this paper examines visual and audio modes of health communication and its consequences on specific audiences' perceptions of HIV/AIDS. Through the development and understanding of the pragmatics used in these awareness and prevention campaigns, and through the identification of their manifest and latent functions, future modes of health communication can become more effective in the educating the countries of Benin, Burkina Faso, Ghana and Nigeria.

MORE THAN A DORM

AUTHOR: YUAN YUAN

ADVISOR: PROFESSOR KATHARINE KENNEDY

I am doing a presentation on my experience at the Harpswell Foundation, Phnom Penh, Cambodia funded by the Hubert Scholarship last summer. I will introduce a typical day at Harpswell, what I ate and where I worked, and how English classes and newspaper discussions were run. I will share my reflection on the education system in Cambodia, and in particular, history, Khmer Rouge, and humanities discourse in the country. I will also encourage ASC students to apply to become future leadership residency at the foundation.

RAT MATERNAL CARE AND ITS EFFECT ON ANXIETY AS MEASURED BY THE OPEN FIELD BOX

AUTHOR: KRISTEN TURNER

ADVISOR: PROFESSOR BARBARA BLATCHLEY

18 Sprague-Dawley rat pups from three separate litters were assessed as juveniles (post-natal day 23) in the open field maze to evaluate their anxiety levels and to see if their anxiety was influenced by their maternal care or their sex. There is little research to support the idea that juvenile rats will perform similarly to adult rats in the open field box. The subjects were placed in the open field box individually for five minutes in a semi-dark room, and the computer kept track of the time each rat spent in the center or the periphery of the box and the total distance traveled. Maternal care proved to be a strong influencing factor of anxiety, but gender was not. Sex is a contributing factor in anxiety tasks for adult rats. It is hypothesized that this difference is because the juveniles' lack of sexual maturity contributed to this difference.

PREVELANCE OF INFECTION OF RICKETTSIAL PATHOGENS IN R. SANGUINEUS TICKS

AUTHOR: MERRILL MONTGOMERY

ADVISOR: PROFESSOR KAREN THOMPSON

In 2004, our group published a study that identified *R. sanguineus*, the brown dog tick, as a vector for Rocky Mountain spotted fever (RMSF) a potentially fatal illness caused by *Rickettsia rickettsii*. This discovery occurred in the wake of an outbreak of RMSF cases in an area where the primary tick vector, *Dermacentor variabilis* is absent. *R. sanguineus* is common in the area where the RMSF cases occurred, and in order to assess the magnitude of the public health risk posed by these ticks, the prevalence of rickettsial infection in them was assessed. 548 ticks were collected from the region in question in 2011. Using SYBR green real-time PCR, we found 18 ticks to be positive in a general test for rickettsial agents. Sequencing of amplified DNA showed that in addition to *R. rickettsii*, ticks in the area carry *R. massiliae* and *R. rhipicephali*.

STRONG SISTERS: WHO ARE WE? WHAT DO WE DO AND WHY?

AUTHORS: ACHANÉ MADDEN, TAMMY LEVERETTE, BEVERLY MCCALL, QUIANNA SMITH, JOY SMITH
ADVISOR: PROFESSOR TINA PIPPIN

Strong Sisters' objective is to re-introduce and publicize the mentoring partnership between Agnes Scott College and Decatur High School. This program originated 14 years ago by Dr. Tina Pippin when the issue of teen-pregnancy was great. To inspire the girls to stay in school, a collaborative mentoring program with ASC students, which helped with academic, social and personal skills, was born.

Strong Sisters a wo-mentoring program (a term coined by our founder Dr. Tina Pippin), continues to seek innovative ways to support the needs and concerns of DHS girls. After restructuring the program, our main focus is girls who are at risk of not graduating.

Through this collaboration we seek to empower and support the girls through the use of workshops on self-improvement, team-building exercises, and academic tutoring. We use a combination of lectures and open dialogue sessions to create a safe space for the girls to openly express themselves.



PRESENTATIONS 2:40-2:55

ALLOPATHIC, OSTEOPATHIC, AND NATUROPATHIC STUDENTS' CULTURAL COMPETENCY AND SENSITIVITY TRAINING

AUTHOR: JORDAN STEELE
ADVISOR: PROFESSOR MARTHA REES

There are astronomical amounts of support and encouragement for culturally competent and sensitive doctors. During Allopathic, Osteopathic, and Naturopathic students' training, they might receive some type of education on cultural competency, defined as the ability to acquire and use knowledge of the health-related beliefs, attitudes, practices, and communication patterns of clients and their families to improve services, strengthen programs, increase community participation, and close the gaps in health status among diverse population groups. There are hundreds of curriculums proposed, but little research and collective data on how effective training is to these students and their attitudes and perspectives. The research project asks the effects and self-reported changes of students after training. This presentation discusses surveyed data showing (1) all the students in the three medical perspectives from around the country failed the cultural competency and sensitivity test and (2) feel they all need more training than what they received.



PRESENTATIONS 2:45-3:05

BSC 102W

STANDARD ENGLISH OR MULTIPLE ENGLISHES?: RETHINKING WHAT ACADEMIA ACCEPTS AS "ENGLISH"

AUTHOR: SU MYAT THU

ADVISOR: PROFESSOR YVONNE NEWSOME

The topic of this research study is English language diversity awareness and attitudes in the American education system. Some literature on language diversity in the education system discusses the power dynamics and effects of promoting Standard American English as the normative language in the academia. The central research question this paper addresses is what are the current beliefs and attitudes held by students and teachers on the college education level when it comes to English language diversity. With the descriptive survey methodology, the responses from students and faculty were collected. From the lenses of critical theory and conflict theory, this paper argues that multiple Englishes should be aimed for in the education system, rather than solely Standard American English, as an important effort that integrates students' social, linguistic, cultural, and academic identities.

BSC 103W

THE WELLS-COCHRAN LETTERS

AUTHOR: ANNA WILLIAMS

ADVISOR: PROFESSOR MARY CAIN

This presentation provides an overview of a collection of letters belonging to the Stone Mountain Historical Society. The letters were written by the Wells-Cochran family, an extended network of siblings, parents, cousins, and in-laws, who once lived in nearby Stone Mountain, Georgia. These letters do not describe drama of epic proportions sometimes associated with the Civil War era, but there is another sort of drama at work in these letters. These letters depict the struggles of everyday life for a soldier and his family back home. The letters from Stone Mountain describe an agrarian lifestyle unlike that of the wealthy planter class, and possibly mention the ownership of a single slave. Above all, the Wells-Cochran letters tell of survival during turbulent times and illuminate aspects of the human condition not exclusively found in the distant past.

BSC 112W

CHANGE BLINDNESS: DETECTING GRADUAL AND SUDDEN CHANGES IN HUMAN AND NON-HUMAN STIMULI WITHOUT VISUAL DISRUPTION

AUTHORS: YUN (WING) JIANG, BETHANY (PAIGE) SULLIVAN

ADVISOR: PROFESSOR BARBARA BLATCHLEY

Change blindness refers to the inability to detect changes in a scene from one view to another. This study investigated whether visual disruption, changing speed and changing stimuli affect change blindness. The researchers hypothesized that change blindness could occur without visual disruption; sudden change was more likely to be detected than gradual change and under gradual change, human stimulus was more likely

to be detected than non-human stimulus. Results showed that failure to detect changes can occur even when visual disruption is absent and when the changes happen instantaneously. Nevertheless, compared to gradual changes, instantaneous changes are still more likely to be detected for a non-human stimulus. However, no significant difference was found between detection rates for gradual and sudden changes of human stimuli, as well as the detection rates for human and non-human stimuli when they both change gradually. Several possible explanations and problems of the experiment were discussed.

BSC 210E

HUBERT PROGRAM TO FIGHT DENGUE IN VIETNAM

AUTHORS: QUYEN TRAN, K. DUONG, M. TAN, AND C.P. SIMMONS

ADVISOR: PROFESSOR HARRY WISTRAND

The Hubert Scholars Program for academic internships in public service combines experiential learning with service to humanity. As part of this program, a laboratory research on dengue fever along with a volunteer project aimed at helping dengue patients from ethnic minority groups was completed in Saigon, Vietnam during the summer of 2011. Dengue fever and dengue haemorrhagic fever are important arthropod-borne viral diseases. Annually, WHO estimated 50 million cases of dengue infections and 500,000 individuals hospitalized with severe dengue worldwide. Currently, there exists no specific treatment for dengue fever or vaccine to protect against dengue. The laboratory research investigated the efficiency of the endosymbiotic bacteria *Wolbachia* in protecting *Aedes Aegypti* from Dengue virus infection. Trans-infected mosquitoes may serve as a new biocontrol for Dengue. The volunteer project at the hospital explored the difficulty faced by patients from ethnic minority groups and the different facets of the Vietnamese health care system.

BSC 304E

UNCOVERING GRASSROOTS ORGANIZATION: A CASE STUDY OF AMNESTY INTERNATIONAL SOUTHERN REGIONAL HUMAN RIGHTS WORKS

AUTHOR: DANLI LAN

ADVISOR: PROFESSOR TINA PIPPIN

This presentation is consisted of three parts: first, systematically introduce Amnesty International to people, including a brief history about this organization, how does it function, what is its mission and previous achievement. Second, I will introduce how Amnesty International organize its Human Rights activities, how it amass people to participate and how AI promotes its humanitarian goals. The second part of this presentation aims at triggering people to think about the influence and efficiency of any grassroots organization like Amnesty International. Finally, I will extend my topic to talk about the significance of having NGOs like AI and present my critique to such organizations based on my personal experience of my internship with Amnesty International Southern Regional Office.



PRESENTATIONS 3:00-3:15

BSC 308

GLASS CEILING EXPERIENCE

AUTHOR: NICOLE HOLBROOK

ADVISOR: PROFESSOR MARTHA REES

In America's workplace, there are few women found in top-level management positions. Many scholars blame women's motivation, family, and job sector for their lack of achievement. I explore if the definition of success differs between White and African American women throughout their careers and if women have experienced the glass ceiling, a plateau for women that levels below top management positions in the work force. I hypothesize that African American and White women define success in the same terms and perceive themselves as successful based on their collective definitions. I expect that women in the private sector experience the glass ceiling more than women in the public sector. Interviews with ten women show the different ways in which women define success and their glass ceiling experience. From a societal and individual perspective, I conclude women believe they are successful and the glass ceiling exists more in the private sector.



PRESENTATIONS 3:10-3:30

BSC 102W

THE DOWNSIDE OF RACIAL UPLIFT ON THE AFRICAN AMERICAN COMMUNITY

AUTHOR: MEGAN MITCHELL

ADVISOR: PROFESSOR YVONNE NEWSOME

The practice of making a spectacle out of the African American community is an age old method of propaganda to perpetuate messages that Black people are unable to meet the standards of euro-American society as attempted through uplift ideology. American society's practice of hegemony allows for the perpetuation of Eurocentric standards to be internalized by African Americans which may negatively affect self-esteem and values which affect socialization and mate selection. The internalization of Eurocentric values presents the futile search for a standard that the African American cannot attain. The developing internal conflict effects how the "uplifted" African American treats those who have also been unable to hold the watery standards of white America with the strainer that is their African American reality. This study seeks to understand how internalization of Eurocentric beliefs and values as professed by social uplift ideology affects self esteem, socialization and interpersonal relationships.

BSC 103W

THWARTING COURTING

AUTHORS: KRISTINA LAMOTHE, KRISTEN TURNER, ANNA WILLIAMS, KELSEY HENSLER
ADVISOR: PROFESSOR ROBIN MORRIS

"Thwarting Courting: The Rules and Regulations on Dating at Agnes Scott College" is an online exhibit created for History 385: Practicing Public History. It examines the student handbooks from the 1900s thru today in search of rules that governed student's social lives. We also conducted oral histories with alumnae and current student and examined back issues of the student newspaper and yearbook. Going decade by decade, rules existed regarding every aspect of dating including parental permission, chaperones, communication, setting, and time. Until the late twentieth century, rules were very tight; this was expected considering the nature of Agnes Scott as a conservative, southern, women's college. However, during the last quarter of the twentieth century regulations become more lax; for example, parietals moved from limited hours to nights and weekends. The evidence shows that while the rules may have seemed restrictive, at the time students never felt limited and accepted the rules.

BSC 112W

VISUAL PRIMING IN AUDIO (MIS)PERCEPTION

AUTHOR: BETH ADAMS
ADVISOR: BARBARA BLATCHLEY

This presentation describes the results of an experiment conducted to determine if a subliminally priming visual cue would prompt participants to "detect" sounds in white, pink, and red noise. The visual cue will consist of a series of pictures, both with and without audio-related content. We expect to find that participants will fabricate the existence of meaningful sounds amidst the noise when presented with audio-related visual stimuli as opposed to control, non-audio-related images. We further postulate that the noises fabricated will be associated with the primer images.

BSC 210E

FROM AGNES TO NATCHEZ

AUTHORS: MARIAH CAWTHORNE, SYEDAH ASGHAR, BRITESSIA SMITH, KATRINA PARSONS, TIFFANY WASHINGTON, RAVEA RODRIGUEZ, CRYSTAL RIDGEWAY
ADVISOR: HIRAM RAMIREZ

A few weeks ago, we partook on an alternative Spring Break trip to Natchez, Mississippi to work with the Natchez Family Home. We worked with three to five year old children, who came from chaotic households. We also worked in their thrift store, gardened, beautified the grounds and cleaned out a house. More than that, we faced racism, sexism, and the lack of religious inclusion. We took these aspects of our trip and reflected on how they change us as individuals. Frankly, we all believe that this experience has made us more aware of how special Agnes Scott College is, and how fortunate we were to be able to have that experience and to have participated with the group that we did. We would like to participate in SPARC to share what we did in Natchez, but to mostly share what we learned and how that has shaped us.

STORIES OF COMMUNICATION, RELATIONSHIPS & SUPPORT. THE STRUGGLE TO OVERCOME ADVERSITY, STRIFE, & HARDSHIP, TESOL AT AGNES SCOTT COLLEGE

**AUTHORS: HEATHER WILLIAMS, MERON HAILEKIRO, ADITI ADHIKARI
ADVISOR: PROFESSOR TINA PIPPIN**

Our SpARC Presentation is focused upon Teaching English to Students of Other Languages (TESOL) at Agnes Scott College; we specifically center upon our individual experiences within the program and the way the organization can be better developed and strengthened in the future. The three of us will introduce our audience to the history and structure of the program, the current statistics and configuration of the course, and finally we will delve into our own individual experiences- be they positive or negative and the challenges we have each faced within this organization. We shall end our presentation with our proposed vision for the future; particularly concentrating upon how to better the structure of the program through ESOL training and certification, ensuring commitment from the tutors and students alike, and reformatting the constitution of the program where necessary.



PRESENTATIONS 3:20-3:35

GRAVE SYMBOLISM: A STUDY OF SYMBOLS IN NATIONAL CEMETERIES

**AUTHOR: ELLEN M. NUNLEY
ADVISOR: PROFESSOR MARTHA REES**

Studies have looked at cemeteries of nonmilitary personnel or cemetery structure. General burial practices have been studied for the major wars, especially the Civil War, but little focus has been directed at the headstones themselves. This study is an analysis of symbols and inscriptions present on the headstones of military personnel in National Cemeteries. In addition to studying the symbols present on headstones I look at the symbols involved in military services in National Cemeteries. Interviews conducted with cemetery representatives provide a deeper understanding of the meanings of the symbols and the history of the cemetery. Surveying the headstones indicating service in these wars may reveal current trends. Preliminary research has shown that there are symbols representing religion, social institutions, and honors or awards received.



PRESENTATIONS 3:35-3:55

BSC 102W

LEGACY OF SLAVERY ON THE BLACK COMMUNITY

AUTHOR: ASHLEIGH OGUAGHA
ADVISOR: PROFESSOR YVONNE NEWSOME

Slavery revolutionized the way the world saw Blacks and how Blacks saw themselves. Many scholars who study the Black identity charge that the identity crisis that many African Americans, in the United States, face is a consequence of slavery. The issues that African Americans face, stem from a double conscious state of mind. Through the use of scholarly journals and media resources this paper will explore the effects that slavery has had on the Black identity and the crisis that many Blacks face today. It is important to investigate the influence that slavery had on personal ideologies and what it meant to be Black because this is a discussion that is relevant to all subjugated peoples. All minorities can learn from the Black experience and see the repercussions that were reaped from the enslavement and degradation of a people's culture.

 BSC 103W

FRENCH MEMORY IN THE BOX OFFICE: HOW THE NARRATIVE HAS CHANGED CONCERNING THE VÉLODROME D'HIVER

AUTHOR: KIEGAN MONTGOMERY
ADVISOR: PROFESSOR VIOLET JOHNSON

Through the analysis and critique of three major French feature films (*Monsieur Klein*, *La Rafle*, and *Elle s'appelait Sarah*), this presentation examines how the French narrative has changed over the decades in regards to its role during the German Occupation and the Holocaust. 16 July 1942, French authorities rounded up 12,884 Jewish men, women, and children and deported them to Auschwitz. This event, *La Rafle du Vel d'Hiv*, is remarkable because it was at the insistence of the French government that the French police deported 4,051 children, none of whom survived. Through the analysis of the varying arrest scenes in these films, there is a clear shift in societal memory as it pertains to society's perception of who the perpetrator is. From 1976 to 2010, a clear progression is shown as the French narrative, and consequently society, takes more responsibility for past actions during World War Two.

 BSC 112W

THE EFFECT OF ORIENTATION ON PERCEIVING VASARELY ILLUSION

AUTHORS: SIJIA LI, ROSA CONTRERAS
ADVISOR: PROFESSOR BARBARA BLATCHLEY

The Vasarely Illusion refers to the phenomenon that people see a bright "star" in the center of a diamond which is created by stacking a series of concentric diamonds of different shades of grey. The current study will investigate whether people can still see a bright shape if the diamonds are sequentially turned away from the previous one. A target number of 30 female participants will be recruited from introductory psychology courses. We expect to find that people can still see a glowing shape in the center of the

diamond when each grey diamond is turned by a small degree. The illusory shape is expected to fade when the degree exceeds a certain limit. In addition, the larger the degree turned is and the fewer the diamonds stack together, the less clear a person will rate the glowing shape.



PRESENTATIONS 3:40-3:55

BSC 308

IT'S A WALK IN THE PARK: DETERMINING THE WALKABILITY OF THE AGNES SCOTT COLLEGE CAMPUS, DECATUR, GEORGIA

AUTHOR: KIMBERLY REEVES

ADVISOR: PROFESSOR MARTHA REES

Many factors influence the walkability of a community, including street width, speed limit, bike paths, pollution, and gender. The walkability of a city reduces the amount of carbon emitted into the atmosphere and the betterment of communities by bringing people together, beautifying cities, and creating safer environments. Through focus groups and surveys, conclusions show what factors influence the walkable or non-walkable community at Agnes Scott College. Safety, weather, and time restraint were the main factors that caused people to refrain from walking further. This paper strives to understand the other main factors that cause people to not walk.



POSTERS AND EXHIBITS

WOOLFORD B. BAKER ATRIUM, SCIENCE CENTER

10:10-10:50

“TWENTY-TWO YEARS OF SERVICE”: A FIRST-HAND ASSESSMENT OF THE DEKALB RAPE CRISIS CENTER

AUTHOR: LAURA BARRETT BLOOMER-SEGREST

ADVISOR: PROFESSOR TINA PIPPIN

This project will examine the history and funding of the Dekalb Rape Crisis Center, describe DRCC community services, and assess the Center's current needs and long-term goals. Ultimately, the project will argue for the necessity of the DRCC, as the only center of its kind in Dekalb County, and prove the immense contribution that the DRCC has made to our community in the past twenty-two years. In addition, the project will inform its audience of the current needs of the DRCC, and its plans for the future. The project finds its foundation and motivation in a semester-long internship experience at the Dekalb Rape Crisis Center.

EFFECTS OF PASSION ON RELATIONSHIP AND SEXUAL SATISFACTION IN HETEROSEXUAL COUPLES

AUTHORS: COURTNEY BROWN, BETHANY P. SULLIVAN, YUN JIANG

ADVISOR: PROFESSOR JENNIFER HUGHES

Passion is an important and exciting element in new relationships. The intense passion that is experienced in the beginning seems as though it will last forever. However, when taking a closer look at the relationships surrounding us, and the ever increasing divorce rate, one cannot help but believe that passion is often fleeting (Hatfield & Rapson, 1993). Is this really the case? Can couples still experience passion? Contreras (1996) found that passionate love is the steadiest predictor of marital satisfaction. We examined whether or not passion has an effect on sexual and relationship satisfaction. We hypothesized that heterosexual couples experiencing passion will have greater sexual satisfaction. We also hypothesized that heterosexual couples experiencing passion will have greater relationship satisfaction.

LIBERALS, LESBIANS, OR LONERS? STEREOTYPES OF STUDENTS ATTENDING WOMEN'S COLLEGES

AUTHORS: RACHEL COOK, KIRNEL DANIEL, DEBORAH WILLIS

ADVISOR: PROFESSOR CARRIE BROWN

There are many benefits of attending a women's college. However, stereotypes of students who attend women's colleges are anecdotally common. The purpose of this study was to document these stereotypes. Fifty-one Agnes Scott students completed a questionnaire. Participants responded to a series of questions,

including: "List the different stereotypes that you have heard about female students who attend women's colleges." The participants gave a total of 247 responses, which the researchers coded into five themes: Character Traits, Sexuality, Ideologies, Social Difficulties, and Background. Subthemes (e.g., Sexuality had three subthemes: Sexual Orientation, Sexually Promiscuous, and Sexually Inhibited) were also formed. The results of this study indicate that there is a wide range of both negative and positive stereotypes about female students who attend women's colleges. The results of this study are important because they begin documenting stereotypes of students who attend women's colleges, which had not been done before.

ATTACHMENT STYLES AND RELATIONSHIP QUALITIES IN ADULT COUPLES

AUTHORS: RACHEL COOK, CLAIRE E. CUSACK
ADVISOR: PROFESSOR JENNIFER HUGHES

Individuals' attachment styles influence many qualities in romantic relationships, such as relationship satisfaction, relationship confidence, and intimacy. We believed that participants with a secure attachment style would have higher relationship satisfaction, more relationship confidence, and greater intimacy than people with an insecure attachment style. Three hundred fifty-four participants completed an online survey and were placed into one of four groups based on their responses to an attachment measure. We found that when the three insecure attachment styles were combined, responses differed significantly only on the measure of relationship confidence. However, when the insecure styles were separated into three groups (dismissing, preoccupied, fearful), secure individuals had significantly better relationship satisfaction and relationship confidence than preoccupied individuals. Our study illustrates the importance of discussing insecure attachment in each of its three types, rather than as a uniform group. This study also incorporates relationship confidence, which has scarcely been discussed in previous research.

THE IMPOSTOR PHENOMENON IN STUDENTS: HOW RACE, GENDER, AND AREA OF STUDY INTERACT

AUTHORS: ANNALEE CRAIGMILE, SU MYAT THU
ADVISOR: PROFESSOR JENNIFER HUGHES

This study sought to find out if some people more likely to suffer from the impostor phenomenon (IP) than others. The IP can severely affect the quality of life of those who suffer from it (Clance & Imes, 1978). The IP is defined as the lack of internal feelings of success despite external achievements. Five-hundred and six participants took part in a study to identify IP feelings, as well as basic demographics. This study intended to find whether gender, age, race, or area of study had an impact on rates of the IP. We found that gender does have an impact on the rates of IP, while age, race, and area of study do not. The IP is fairly common, and should be identifiable to counselors, educators and health-care professionals. If these groups are aware that some populations are more vulnerable to IP feelings than others, they might be able to intervene in IP feelings.

DUAL WAVELENGTH OBSERVATIONS OF THE STRATOSPHERIC AEROSOL LAYER

AUTHORS: HAVILAND FORRISTER, GARY GIMMESTAD, DAVID ROBERTS, ALLISON MERCER

ADVISOR: GARY GIMMESTAD

We acquired 523-nm lidar data in the stratospheric aerosol layer (SAL) over several months to establish our educational micropulse lidar's measurement limits as well as to obtain baseline data in a quiescent period for our integrated aerosol backscatter (IABS) observations at the latitude of 33⁰ N at 316 m MSL. In addition, on several occasions, we operated the 523-nm lidar simultaneously with a 1574-nm lidar. We were able to optimize and quantify the performance of the eyesafe lidar. We analyze our data to find the IABS in the SAL and determine that the results are comparable to those reported by other researchers. In addition, we measured the Ångström coefficient for the IABS to be in the range of 1.8, which is characteristic of Mie scattering for previous estimates of the SAL droplet radius.

GAY AND HETEROSEXUAL MALES' RELATIONSHIP SATISFACTION, SEXUAL SATISFACTION, PASSION AND COMMITMENT

AUTHORS: CRISTINA GUTIERREZ, ANNALEE CRAIGMILE, LEXI PULICE-FARROW

ADVISOR: PROFESSOR JENNIFER HUGHES

The purpose of this study was to examine gay male relationships and heterosexual male relationships and their passion and commitment, as well as, their relationship satisfaction and the sexual satisfaction. Based on the prior research, we hypothesized that heterosexual males would report higher relationship satisfaction and higher sexual satisfaction, gay males would not report higher levels of passion, and heterosexual males would not report higher levels of commitment in their relationships. One hundred twenty-one men took our online questionnaire and 27 of those identified as gay males. The questionnaire consisted of questions about relationship satisfaction, sexual satisfaction, and components of love (i.e. passion and commitment). As predicted we found that heterosexual couples have higher relationship satisfaction, as well as sexual satisfaction, when compared to gay male couples. Also as predicted, we did not find significant differences for passion and commitment for gay males and heterosexual males, which supports prior research by Mackey et al. (2004). There are definitely some restrictions to this study, such as the small sample size. In the future we plan to collect a larger sample size and to also evaluate the communication patterns of gay males and heterosexual couples.

LISTENING TO MUSIC WHILE COMMUTING TO WORK AND LEVELS OF COMMUTE STRESS

AUTHORS: CRISTINA I. GUTIERREZ, COURTNEY A. BROWN

ADVISOR: PROFESSOR JENNIFER HUGHES

The purpose of this study was to compare those who listen and do not listen to music while commuting. We wanted to see the differences between these two groups and commute stress, feelings of coping, and feelings of time urgency during the commute. We hypothesized that commuters who listened to music

would be more likely to have lower commuter stress, greater feelings of coping, and less feelings of time urgency during the commute. Six hundred ninety participants were recruited for the study and they drove an average of 30.41 miles per day. Twenty undergraduate students collected participants via e-mail and flyers. A snowball sampling technique was used in the study to recruit participants. The participants had to at least drive 10 minutes or more in order to qualify for the study. We found contrary to our predictions, that commuters that listened to music had higher commuter stress, fewer feelings of coping, and greater feelings of time urgency during the commute. Our hypotheses were not supported. Further research needs to be done to clarify these results.

A HUB FOR GENDER AND SEXUALITY

AUTHOR: RUBY KETT

ADVISOR: PROFESSOR TINA PIPPIN

There are currently over 200 women's centers on college campuses in the United States, as well as over 200 centers related to sexuality and gender expression. Women, gender, and sexuality centers address varied needs at college campuses. Agnes Scott College has neither a women's center nor a center for gender and/or sexuality. As a women's college, addressing issues of gender and sexuality in a modern way, should Agnes Scott start a center to exclusively address issues relating to women, gender, and sexuality at the college, in the community, and in the global sphere.

WHERE'S WALDO PHEROMONES

AUTHORS: JULIA KIRKLEN, BRITTESSIA SMITH, ELISE FOUNTAIN

ADVISOR: PROFESSOR BARBARA BLATCHLEY

Our experiment will test the influence of female and male pheromones on the attention level of female subjects. We will test the attention level of our participants using the task of a visual search. Participants will complete these tasks while simultaneously being exposed to a pheromone. The objective of our research is to determine if an exposure to these hormones will have a positive, negative or no affect on their performance of their task. By conducting this experiment we aim to determine if pheromones have a measurable effect on the mental processes of our participants. It has been proven that male pheromone exposure increases the attention level of female participants. Our hypothesis is that the female pheromone will decrease the attention level of our female participants and the control will show no effect.

CHARACTERIZATION OF SEVERE MUSCULOSKELETAL WOUND REGENERATION

AUTHOR: TARAN LUNDGREN

ADVISOR: PROFESSOR DOUGLAS FANTZ

Musculoskeletal disorders are the most common cause of severe long-term pain and physical disability worldwide with an estimated cost to society of over \$215 billion per year in the USA alone. The lab I work

in at Georgia Institute of Technology has developed a critically sized composite bone and muscle defect rat model to assess therapeutic strategies to restore limb function after severe injury. The current therapeutic is a nanofiber mesh scaffold containing alginate and rhBMP-2. I use histological staining to look for bone formation, cartilage, and fibrosis in the regenerating tissue. I develop immunohistochemistry protocols to analyze expression of molecules signifying bone formation, angiogenesis, and revascularization of the injury site. We predict there is a significant level of cross-talk between bone and surrounding soft tissue during wound regeneration. This histological information combined with other quantitative measurements will help characterize endogenous repair mechanisms and the effectiveness of therapeutics.

EVALUATING PASSION: INVESTIGATING LENGTH OF TIME TOGETHER AND CHILDREN

AUTHORS: NADRAT NUHU, SIJIA LI, RAVEA RODRIQUEZ
ADVISOR: PROFESSOR JENNIFER HUGHES

Passionate love, defined as the extreme longing to be with another person, has been found to only last within the initial stages of a relationship. The current study proposes that influences such as the length of the relationship, gender, and the presence of children affect the level of passion an individual feels in their relationship. We recruited 121 men and 233 women to participate in this study. Results showed that the length of relationship, the presence of children, and gender significantly affected passion. The men and women in couples that had been together the least amount of time reported the greatest passion. The men and women without children reported greater passion. Men reported more passion than women. These findings provide couples with valuable information about how passion can decrease over the length of a relationship and that the presence of children living at home can be related to decreased passion.

RELATIONSHIP BETWEEN GAZE AND COLOR PREFERENCE

AUTHOR: LAURA SCHAEFFER
ADVISOR: PROFESSOR BARBARA BLATCHLEY

The purpose of this study is to investigate the correlation between eye gaze and color preference. Some research has shown a sex-linked genetic difference in color receptor sensitivity suggesting females prefer colors in the reddish-purple region whereas males prefer colors in the bluish-green region. Therefore, researchers predicted females will both gaze at and prefer colors of a reddish-purple hue. Using an eye tracking device, participants were shown an image of six squares of different colors and then asked to indicate their most favorite and least favorite color. Fixation points, measured by the duration of eye gaze, were used for data analysis. Early comparisons indicate a correlation between least favorite color and eye gaze. Findings may be useful to marketing.

AN INVESTIGATION OF AGE, LENGTH OF COMMUTE IN MINUTES AND MONTHS, AND GENDER ON STRESS LEVEL

AUTHORS: MARIA VEGA, ANNALEE CRAIGMILE
ADVISOR: PROFESSOR JENNIFER HUGHES

We examined the effects of age, commute length in minutes and months, and gender in relation to stress levels. Five-hundred and twenty seven participants, ranging in age from 18-66 years, were recruited by student research assistants for this study. The participants took an online survey assessing demographics,

commute, employment, and school information. We found that commuters with longer commutes are significantly more stressed than commuters with shorter commutes to work or school. We also found that females were significantly more stressed than males during their commute. These results illustrate that commuters should find ways to make their commutes shorter by possibly moving closer to their job or finding a job closer to their home. Other options would include finding shorter routes and leaving before or after traffic has decreased. If the commuters do not encounter as much traffic congestion, their commute will be shorter reducing the likelihood of stress.

OTOLITHS SIZE AND VARIABILITY IN TWO WRASSE SPECIES

AUTHOR: MEGAN WILLIAMS

ADVISOR: PROFESSOR LOCK ROGERS

Otoliths are the ear bones of fishes used for balance and detecting vibrations. Much like a tree, otoliths exhibit growth rings. In temperate species these rings are annual, but in many tropical species rings are deposited daily. If there is a tight correlation between otolith size and fish size, then we can back-calculate an individual's growth rate across its entire lifetime. To establish this correlation we studied two closely related species of wrasse, *Thalassoma amblycephalum* and *T. bifasciatum*. As a side project, we were interested in the degree of lateral symmetry between the otoliths on the right and left sides of an individual. The general expectation is that physical characters should be symmetrical. However, during our dissections we observed seemingly high levels of variation. This could be a result of weak selection on some internal structures.

HAVING CONSERVATIVE IDEOLOGIES IS CORRELATED WITH COLOR-BLIND RACIAL ATTITUDES

AUTHOR: DEBORAH WILLIS

ADVISOR: DR. CARRIE M. BROWN

The purpose of our study was to further validate the Core Conservatism Scale (Solomon & Harvey, 2011) by determining if it correlated with color-blind racial attitudes, as measured by the Color-Blind Racial Attitudes Scale (Neville et al., 2001).

Participants for this study were recruited via Mturk (www.mturk.com). A total of 63 participants (43% female, 57% male; M age = 24.32, SD = 3.61), who all self-identified as White, completed an anonymous online questionnaire. The questionnaire consisted of the Core Conservatism Scale and the Color-Blind Racial Attitudes Scale.

A series of Pearson correlations revealed that the three subscales from the Core Conservatism Scale were significantly and positively correlated with the three subscales of the Color-Blind Racial Attitudes Scale. All of the correlations were significant at the .05 level.

The implications of the present study suggest that, when people hold more conservative ideologies, they are more likely to hold color-blind racial attitudes.



DANCE PERFORMANCE
WINTER THEATRE, DANA FINE ARTS BUILDING

12:00-12:45 P.M.

ADVISOR: PROFESSOR BRIDGET ROOSA



THEATRE PERFORMANCE
WINTER THEATRE, DANA FINE ARTS BUILDING

1:30-2:15 P.M.

SHAKESPEARE'S WOMEN

PERFORMERS: MEGAN MILLS, MOLLY SAUNDERS

ADVISOR: PROFESSOR DAVID THOMPSON

This performance explores the ways that Shakespeare represents women in his plays through a selection of monologues and original analytical pieces. Through the monologues of Juliet, Cressida, Helena, Beatrice, Katherine, Lady MacBeth, Emilia, and Mistress Page, the show examines a variety of women. "Shakespeare's Women" categorizes these characters according to their relationship towards marriage, which is the defining aspect of their lives. From optimistic young lovers to women interrogating the institution of marriage to wives in established marriages, this performance explicates the significance of marriage for women in Shakespeare. Combining performance with literary analysis allows for an interdisciplinary approach, which offers fresh insights into these classic characters.



AGNES SCOTT COLLEGE

THE WORLD FOR WOMEN