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2013 Symposium Overview

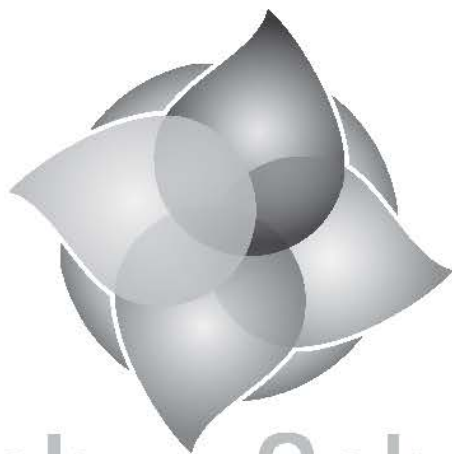
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Fourth Annual



Research + Scholarship
SYMPOSIUM

Cedarville University: Inspiring Greatness

April 10, 2013

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PODIUM PRESENTATIONS

College of Arts and Sciences

NAME	POSITION	DEPARTMENT	ABSTRACT TITLE	ABSTRACT AUTHORS
Shawn Bulce	Undergraduate Student	English, Literature, and Modern Languages	Approaches to Reading Bonhoeffer's <i>Das Gebetbuch der Bibel</i>	Kevin Brown Shawn Bulce Jon Kauffman Jessica Schneider
	Dietrich Bonhoeffer had an understanding of the Psalms that not many people, past or current, have. This is demonstrated in his book, <i>Das Gebetbuch der Bibel (The Prayer Book of the Bible)</i> . Bonhoeffer used this book to show how understanding the Psalms teaches believers how to pray by breaking the prayers in the Psalms down to the same components as Jesus used in his prayer to teach the disciples. In order for the truths that Bonhoeffer wrote about to be true, they must have impacted his life in some way, and we propose that they certainly did. We will show how the book connects to Bonhoeffer's life in the following ways: 1. The themes in the book can be seen throughout Bonhoeffer's time in Harlem, New York. 2. The rise of the National Socialist government instituted an anti-Semitic environment into which Bonhoeffer's work was received. 3. The themes and lessons of the book played a large role in Bonhoeffer's personal life during his time in prison. With these connections, we will also present an in-depth analysis of the Psalms that Bonhoeffer specifically references. We desire to enter the mind of a genius who loved God and lived a life accordingly, and we will do it mainly using <i>Das Gebetbuch der Bibel</i> .			
Amy Carmichael	Undergraduate Student	Music and Worship	The Not So Silent Planets: The Medieval and Renaissance Concept of Musica Mundana	Amy Carmichael
	The concept of musica mundana does not hold a high place in musicians' or philosophers' imaginations as it once did. While in the medieval and Renaissance periods this concept was considered worthy of study, now it is only briefly mentioned in music history classes around the world and only as an amusing musical fact. The objective of this presentation is to present the argument that musica mundana should be understood as a serious undertaking to explain the order of the universe in the medieval and Renaissance periods and how it should be understood today. To do this, we will look at the mindset of the medieval and Renaissance periods, the history of musica mundana, and its importance to contemporary musicians.			
Brian Cates	Undergraduate Student	Music and Worship	On the Power of Music: Using 'Cosmos' and 'Anthropos' to Articulate a Holistic Approach to Discussing the Power of Music	Brian Cates
	Music is an experience that is universal to all of mankind, no matter one's race, gender, culture, or socioeconomic status. Whether it's beholding one of Mahler's symphonies in Carnegie Hall or listening to the "No. 1 Top Single" on iTunes using headphones, one truth is evident: music moves. The statement "music moves" inherently possesses an implication of the 'cosmic' and the 'anthropic' nature of music – a dualistic union of both mystery and humanity. This one truth has been the subject of an ongoing 2,000-year old discussion that attempts to articulate the powerful reaction that results from experiencing music in all forms, beginning with the Ancient Greeks of antiquity who possessed a cosmologically grounded explanation to the power of music. However, as time moved forward, this cosmological, mysterious paradigm of the power of music slowly began to incorporate explainable anthropological articulations of the power of the music with respect to the human emotions, senses, and thoughts. This incorporation of 'anthropos' reached a climax in the Renaissance era with the ushering in of humanism, which stripped away the mysterious and replaced the cosmologically grounded explanation of music with the anthropologically grounded view of naturalism. Since this profound departure from the 'cosmos', society seems to be at a loss in articulating accurate reactions to music. This paper offers two proposals with respect to musical thought, one for society at large and one for the individual. I assert in this paper that society, in general, needs to return to an appreciation of the 'cosmos', the answerable, and the mysterious in nature, and that the individual needs to commence thinking holistically with respect to music incorporating both 'cosmic' and 'anthropic' thought. I have reached my conclusions, assertions, and propositions based on this thesis by critically analyzing both primary and secondary resources in the form of the historical documentation methodology.			
Abby Cline	Undergraduate Student	English, Literature, and Modern Languages	Equipping These Kids: Connecting Collegiate Writing Centers to Urban High Schools	Abby Cline Cassie Herbert
	Our goal is to present research encouraging college writing centers to initiate relationships with urban high schools that do not yet have writing centers. As we examined the current state of existing secondary classroom writing centers, we realized that not much research extended specifically to urban environments. By encouraging capable college and university writing centers to reach out to nearby high schools, we hope to create a potential for healthy, working relationships between institutions of higher learning and high schools. By utilizing the resources available to college centers, we will show that inner-city high schools can receive the help and support they need in order to equip their students to truly succeed.			
Rachel Coon	Undergraduate Student	Music and Worship	Music and Race Relations: Musical Segregation in the Jim Crow South	Rachel Coon
	Throughout American history, music has often been used to accomplish certain social agendas. This is particularly evident in the race relations between black and white Americans. Most would agree that one's cultural and ethnic background has a significant influence on the type of music one listens to today. Back in the segregated society of the late 19th and early-20th centuries, society strongly dictated which music was appropriate for which people group. In this presentation, I will elaborate on the segregation of the music industry and the separation of "black" and "white" musical genres. I propose that the categorization of "race" and "hillbilly" records as well as the blues and jazz performers contributed to the already present interracial animosity in the early-20th century. My proposal comes from a study of historical accounts, analyses of various experts, and testimonies of musicians of the time.			
Cora Gray	Undergraduate Student	English, Literature, and Modern Languages	Yesterday and Today: Milton and the Tyrant's Image	Cora Gray
	This article examines John Milton's perception of tyranny in his 17th-century context as expressed in his poetry and prose works and applies it to the 21st-century. Using the theories of Guy Debord, Jonathan Beller, and Jean Baudrillard, this article explores how images can act to control the perceptions and desires of the masses. The governing thesis is that in the 17th-century, Milton exposes the tyrant's ability to manipulate the masses through imagery, whether the pompous ceremony of the Renaissance king or the glamorous advertisements of the postmodern corporation, but he also offers hope for the individual to pursue truth despite society's enslavement. The article compares Milton's critique of monarch's use of imagery to control the political loyalty of the masses to the 21st-century corporations' use of images to control the consumerist desires of the masses. The article specifically draws from Charles I's manipulation of pompous spectacles to hide his tyrannical actions and modern corporations' dependence upon advertisements to create new needs that their products can satisfy, such as the international water bottle organization FUI and the musical cable network MTV. Yet while condemning the tyrant's abuse of imagery in order to fashion a more desirous perception, Milton also suggests that the individual has the power to resist the tyrant's deception through relying upon Divine guidance and reason.			

PODIUM PRESENTATIONS *(continued)*

College of Arts and Sciences *(continued)*

NAME	POSITION	DEPARTMENT	ABSTRACT TITLE	ABSTRACT AUTHORS
Michayla Lehman	Undergraduate Student	English, Literature, and Modern Languages	Tutoring the Influx of Students with Asperger's Syndrome in the Writing Center	Michayla Lehman
	<p>My paper discusses practical tutoring strategies for aiding students with Asperger's Syndrome (AS) in the writing center. I begin by surveying the current literature regarding AS, specifically focusing on the research that discusses how to tutor students with AS. I focus on research conducted by researchers such as Julie Neff, Terry Collins, and Rebecca Babcock, among others. I then discuss and evaluate the different strategies suggested for handling each tutoring session as well as offer helpful tips for assisting such students with the writing process. In addition to presenting this research, noting the most beneficial and efficient strategies a tutor can implement, I also suggest areas where research on tutoring students with AS falls short. In particular, I discuss how Pierangelo and Giuliani reveal that some students with AS risk dependency on their tutors and the lack of research on how tutors can encourage, and even develop, students' independence from tutoring. Thus, I use Collins, Babcock, and Neff as examples to discuss why independence for students with AS is so important, yet how that can be balanced effectively with appropriate tutoring assistance.</p>			
Kimberly Reitsma	Undergraduate Student	Music and Worship	In the Cloister: The Development and Acceptance of Church Music by Women	Kimberly Reitsma
	<p>During the medieval and Renaissance periods, there were women that were involved in the art of music and music composition. But these women had to leap over some great obstacles first. Women had to endure segregation, forced inferiority, and subordination to men in society and even in the Church. The Church had condemned women to eternal silence and women had no hope in advancing themselves under the male-dominated society. Women could only dream about using their musical skills and talents in their times. There were a few groups of women that were able to make a name for themselves in the music community, especially in composition. These women composers were usually either nuns, women of nobility, or women in professional musical families. The women in cloistered communities had the biggest impact on church music during these periods which the group that this presentation will be focused on. Nuns, because of their unique position in society, were able to concentrate on developing their musical skills to write compositions that influenced Church music during the medieval and Renaissance periods. The life inside the convent was drastically different from the outside world, especially when it came to what women could do. Women in the convents were able to advance themselves greatly through the education they received within their sanctuaries. A good portion of their education was toward musical studies and disciplines. This is how many nuns were able to pick up the discipline of music composition and make a great influence on church music during this time period. Some of the composer nuns that we know of today are Kassia, Hildegard of Bingen, Birgitta of Sweden, Suster Burken, Gracia Baptista, Vittoria Rapheaela Aleotti, and Donna Lucrezia Orsina Vizzana. Even though society tried to silence women in all aspects of life, the Church gave the environment needed to help some women emerge as composers.</p>			
Jesse Silk	Undergraduate Student	English, Literature, and Modern Languages	Distinguishing Civil Contract From Christian Marriage	Jesse Silk
	<p>While marriage performed through a church is typically validated by the government, the belief that Church and State ought to be separate entities in regard to marriage has the utmost relevance in today's culture. In several of his works, most notably <i>Doctrine and Discipline of Divorce</i>, John Milton analyzes what constitutes matrimony and what marriage policies the Church and government should adopt. Milton's texts are a starting point for a critical discussion on civil contract. Biblical research, analyses of Milton's texts, and an understanding of cultural issues showcase the inconsistencies of the church's prevailing perceptions of divorce and gay marriage. A conclusion that defines Christian marriage as entirely separate from civil contract provides an immensely valuable framework for understanding pertinent issues the America's legal system and churches. This perspective, unbeknownst to many, can spark discussions in entirely new realms of scriptural and cultural research because it provides resolution to the currently unresolved matters of gay marriage and divorce.</p>			
Josiah Sleepy	Undergraduate Student	English, Literature, and Modern Languages	Speed of Light: "Becoming" as a Model of the Female Experience in Claudia Smith Brinson's "Einstein's Daughter"	Josiah Sleepy
	<p>Claudia Smith Brinson's short story "Einstein's Daughter" portrays a young nameless girl who is eager to actively participate in life despite her mother's wish for her to wait and be patient. Brinson tells the story from the point of view of the daughter, whose only moniker throughout the story remains "Einstein's daughter," identifying her as the product of a man who says that motion is relative. In fact, Einstein's theory of relativity constitutes a major theme throughout the story, providing a metaphorical paradigm in which to view feminine identity. Likewise, Friedrich Nietzsche's theory of the eternal recurrence of the same and Soren Kierkegaard's concept of repetition may be used as helpful paradigms through which to understand the female experience. The daughter's motion serves as the focal point of conflict in the story; she self-determines to be fast, momentous, and circular, while her mother's (and, by extension, her grandmother's and great-grandmother's) designs for her include the typical feminine regimen: slowness, meekness, patience, and stability. The daughter, by taking on more stereotypically masculine traits and activities, actually enriches the female experience by exhibiting a tendency toward becoming rather than being. "Becoming" here signifies an open-ended and unfinalized process, whereas "being" indicates a fixed and finalized essence. Typically, culture prescribes the feminine mode as one of static passivity and the masculine mode as one of dynamic activity, but Einstein's daughter deconstructs that binary: by breaking out of her rigid female constructs, she approaches a life of radical becoming, which is a richly feminine experience of identity. In fact, Brinson shows through the character of Einstein's daughter that we can think of the female experience in terms of becoming rather than being in three ways: her focus on the relativity of motion and time based upon lifestyle speed, her illustration of Nietzsche's eternal recurrence theory through generational recurrence, and her embodiment of Kierkegaard's concept of repetition as a religious movement from nonexistence to existence.</p>			
Hope Strayer	Undergraduate Student	Music and Worship	From Neumes to Notes: The Evolution of Music Notation	Hope Strayer
	<p>Today's culture often scorns the ancestors of an innovation and praises the final result; however, new does not denote superior. Music notation serves as one example of an innovation that is both lauded and derided. Early forms of music notation appear vague and ambiguous according to modern standards. But when combined with oral traditions, early music notation contained all the information required for a successful performance. Most facts pertaining to the notation of each period are clear, but multiple interpretations of early notation exist. The objective of this research is to critically analyze key periods of Western music notation to formulate a model for the evaluation of early notation. The research methodology consists of engaging primary and secondary sources from historical documents. These sources include scores, early musical treatises, and contemporary interpretations. The concluded model asserts that early music notation seems insufficient, imprecise, and indefinite when compared to contemporary forms, but early notation cannot be removed from the context it served and evaluated through the scope of modern requirements. From the origin of neumes in the ninth century to the rhythmic developments of the Ars Nova period in the 14th-century, the evolution of music notation progressed as series of innovations that worked alongside oral traditions to meet the musical demands of each period.</p>			

PODIUM PRESENTATIONS *(continued)*

College of Arts and Sciences *(continued)*

NAME	POSITION	DEPARTMENT	ABSTRACT TITLE	ABSTRACT AUTHORS
Cameron Swett	Undergraduate Student	Music and Worship	The Trumpet: Tooting Terror to Melodious Music Maker	Cameron Swett
	Trumpets have been present in music for several thousand years. However, they have not always been a melodic instrument. The objective of this paper is to show the progression of the trumpet from a simple noise maker to an advanced melodic instrument from antiquity to the Baroque period. Three factors will be examined within the paper. First, the evolution of the physical construction of the trumpet in Antiquity, Medieval, Renaissance, and Baroque periods. Second, its functions in war, religion, and entertainment in the previously mentioned time periods. Finally, the progress of education that was exemplified in trumpet guilds. These factors exemplify how the trumpet has progressed from a tooting terror to a melodious music maker.			
Andrew Symington	Undergraduate Student	Music and Worship	The Ninth Symphony of Antonin Dvorak	Andrew Symington
	When Antonin Dvorak's Ninth Symphony premiered in Carnegie Hall in New York City on December 16, 1893, it was enthusiastically received. That reception has occurred many times since then in many other concert halls and cities around the world. Dvorak composed it during his time in New York while teaching at the National Conservatory. His aim was to implement African-American and Native American folk-song melodies into the symphony in an attempt to demonstrate to young American composers how they might incorporate the rich musical material contained therein into their classical compositions, thus creating a distinctly American nationalistic music. The purpose of this essay is to analyze the Ninth Symphony and synthesize the recent scholarly study which has been done on the work in order to obtain a deeper understanding of its component parts and the factors which influenced the composer regarding sources, techniques, motivations, and skills, etc. Dvorak's Symphony No. 9 in E minor "From the New World" is a product of Dvorak's desire to promote nationalism in classical music, his Czech musical heritage, and the influence of Brahms and other symphonists, and the influence of African-American and Native American folk music. This essay will discuss each of these four factors and their subtopics since they seem as though they were the most influential in Dvorak's composition of his ninth symphony. Subtopics include Dvorak's exposure to Czech folk songs as a child and his fascination with African-American melodies, which he discovered early on during the years when he lived in America. The goal of researching specific aspects of Dvorak's life is to illuminate the specific ways in which each is evident in the Ninth Symphony.			
John Whitmore	Faculty	Science and Mathematics	Seven Misconceptions About The Coconino Sandstone, Grand Canyon, Arizona	John H. Whitmore
	The Coconino Sandstone of the Grand Canyon area of Arizona is one of the few rock formations that are often used as convincing evidence against the Genesis Flood. Many claim it represents fossilized desert sand dunes. The sandstone is noted for its large high-angle "cross-beds" that supposedly formed as dry sand avalanched down slopes on sand dunes. Based upon a multi-year study, seven widely held misconceptions about the character of the sandstone were uncovered: (1) it has steep cross-bed dips at the angle of repose. (2) It has well-rounded and well-sorted sand grains, just like those of modern sand dunes. (3) As the Coconino Desert formed, it filled open mud cracks on a dry floodplain. (4) Vertebrate footprints in the Coconino were made by animals walking on steep desert sand dunes. (5) Raindrop prints can commonly be found in the sandstone proving its subaerial origin. (6) The sand grains of the Coconino are "frosted," meaning their surfaces have been damaged by multiple grain-to-grain collisions while being blown about in a desert. (7) Large contorted beds in the Coconino represent slumped sand dunes. Contrary to these common claims, our research has found (1) cross-bed dips of 20° not 32°, (2) subangular and moderately sorted sand, (3) sand injectites at the base of the Coconino (not mud cracks), (4) evidence the vertebrates were making tracks underwater, (5) the "raindrop prints" do not resemble modern prints, (6) the sand grains are chemically, not mechanically, frosted, and (7) the large folds have the characteristics of parabolic recumbent folds that are known to be produced by strong subaqueous currents. These discoveries, along with some other evidences that we have found, are suggestive that this sandstone was deposited underwater, not in a desert. Our current hypothesis is that the Coconino represents a subaqueous sand wave deposit. Such deposits are quite common today on continental shelves with strong ocean currents.			

College of Health Professions

NAME	POSITION	DEPARTMENT	ABSTRACT TITLE	ABSTRACT AUTHORS
Sharon Christman	Faculty	Nursing	Spirit: A Biblical Study	Sharon Christman
	Spiritual care is an activity that most nurses aspire to, yet most nurses feel inadequate to perform. There is a plethora of nursing literature that explores and describes spiritual care. Furthermore, there are nurse scholars and researchers who have published recommendations on how to provide spiritual care. However, there is no nursing literature that attempts to describe or understand what the spirit actually is. The purpose of this presentation is to present what I have learned from studying the word 'spirit' as it occurs in the Bible. I will present the three themes that emerged from this study, I will explore what the Bible teaches us about the spirit within the context of these three themes, and then I will suggest ways that this information can help nurses provide spiritual care.			
BrookeLyn Dietz	Undergraduate Student	Psychology	Forgiveness and Spirituality	Dr. Chi-en Hwang BrookeLyn Dietz Holly Sly
	As of today, there has not been a large amount of research in the area of forgiveness. Research has suggested that this is because forgiveness is considered to be a religious issue. However, research has shown that forgiveness plays a role in an individual's personal, as well as spiritual, life (Lampman, 1999). This research proposal focuses on the area of forgiveness as it relates to undergraduate students' spiritual and general well-being. Three hundred and seventy undergraduate students from Cedarville University participated in a survey through Survey Monkey. This survey consisted of three forgiveness scales and one spiritual well-being scale as well as several demographic questions relating to family structure. We hypothesized that forgiveness will positively correlate with spiritual well-being, and that students with higher levels of forgiveness will score higher on all other scales. After retrieving the survey results, data analysis confirmed our hypothesis that levels of forgiveness positively correlated with levels of well-being, both spiritual and general. Results also showed that higher levels of forgiveness indicated more positive responses and less negative responses. Another finding included a correlation between higher levels of forgiveness and increased willingness to forgive across a variety of circumstances.			

PODIUM PRESENTATIONS *(continued)*

College of Health Professions *(continued)*

NAME	POSITION	DEPARTMENT	ABSTRACT TITLE	ABSTRACT AUTHORS
Michael Firmin	Faculty	Psychology	Shared Height-Related Dynamics and Unique Perspectives of Tall College Women Athletes	Michael Firmin Sarah J. Hoffman Ruth L. Firmin Alisha D. Lee
<p>The present study summarizes previous qualitative research by Firmin, Hoffman, Lee, and Firmin (2009) in which we had interviewed 24 college females who were 5'11" or taller regarding their self-perceptions of being tall. The findings of these interviews are compared to findings from a present data collection of 23 college females who were 5'10" or taller—but who had the added dynamic of being varsity college athletes. Women from both data sets shared overlapping perspectives regarding the extra attention they received, personal adjustments they had to make, social factors that impacted their lives, and difficulties they experienced with clothing, all as a result of their tallness. However, the two groups also differed in key ways, with the athletic tall women reporting better satisfactions in some domains and yet greater frustrations in others. Particularly, this study lends to the idea that the tall athletes were better able to celebrate their tallness as a direct result of their participation and success in athletics. Conversely, participants in the athlete sample also shared an increased frustration that differed from their non-athlete counterparts. This frustration related to the possible perception of others that due to their height and body type they lacked femininity.</p>				
Chi-en Hwang	Faculty	Psychology	Demand Characteristics of Respondents and the Reliability and Validity of a Survey Instrument	Chi-en Hwang
<p>The Bible Scale developed by Village (2005) to assess religious beliefs was administered to a sample of 226 CU students and 237 alumni through Survey Monkey in April, 2012. We used a principal components factor analysis with promax rotation as the primary technique to determine the dimensions of the 33 items on Village's Instrument based on this sample. We then selected the three factors with internal consistency reliability, measured by Cronbach's alpha, greater than .70 for subsequent analyses. We named the first Conservative Lifestyle because the items dealt with divorce, cohabitation, premarital sex, abortion, and homosexuality. We labeled the second factor Religious Certainty because the statements eschewed doubt, liberalism, and other faiths in contrast to Christianity. We called the third scale Biblical Authority because it affirmed the Bible as the sole source for teaching and belief. The three factors together accounted for approximately 56 percent of the total variance. The Village scale was again administered to a new sample of 682 CU students in November, 2012. The same statistical analyses was applied to the data. It was expected that with a larger sample size, both validity and reliability would improve. However, the factor structure failed to hold and the internal consistency reliabilities of the scales dropped significantly. Closer examination of the data showed a higher percentage of missing responses in the November sample than in the April sample. Feedbacks from some of the students suggested that they were reluctant to answer questions regarding their beliefs of the Bible during the time of data collection. The psychometric discrepancy can be attributed primarily to the differences in attitude while taking the survey. This is an example of how demand characteristics in the respondents affect the validity and reliability of survey results.</p>				
Xiaoying Ma	Graduate Student	Nursing	Senior BSN Students' Perception of Satisfaction and Self-confidence after a Simulated Mock Code Experience: A Descriptive Study	Xiaoying Ma
<p>In the current health care environment, nurses are required to provide timely and competent responses to the rapidly changing demands and explosion of knowledge. High-fidelity simulation offers unlimited opportunities to practice rare and critical events in a safe and controlled environment. Literature supports the use of simulation in acquisition of nursing knowledge and skills. However, the findings on students' perceptions of satisfaction and self-confidence after simulated experiences are inconclusive. The purpose of this descriptive study is to describe B.S.N. students' perceptions of satisfaction and self-confidence after a simulated mock code experience and to explore the relationships between students' perceptions of self-confidence and satisfaction and the demographic characteristics. A convenience sample of 50 senior B.S.N. students who were enrolled in a senior-level nursing Leadership and Management course was included in the study. The participants completed a paper-and-pencil five-point Likert scale Student Satisfaction and Self-Confidence in Learning (National League for Nursing, 2004) after the simulated mock code experience. The results indicated that students were satisfied with the mock code simulation (mean=4.49, SD=0.53) and felt confident with code situations after the simulated experience (mean=4.42, SD=0.41). No significant correlations were found between the demographic characteristics and student satisfaction and self-confidence. Independent t-tests did not reveal significant differences between satisfaction/self-confidence and past experience as healthcare providers. However, previous experience working as an EMT was found to significantly contribute to high level of self-confidence after a simulated mock code experience. The findings of this study provide insight into students' perceptions of self-confidence and satisfaction toward simulation and may facilitate faculty as they integrates simulation into nursing curriculum.</p>				
Maya Shrestha	Graduate Student	Nursing	Impact of Pro-life Education on Abortion Attitude in Nepal	Maya Shrestha
<p>Since the legalization of abortion in Nepal in 2002, the number of induced abortions has increased. Various national and international organizations have been giving greater attention and effort in enhancing the public's knowledge on legal abortion. However, little research on pro-life education and its impact on abortion attitude have been conducted in Nepal and around the world at large. The purpose of this research is to explore the impact of pro-life education on abortion attitude in Nepal. This one group pre-test post-test pilot study is based on the cognitive dissonance theory (CDT), which postulates that education brings attitude change. The study was conducted in Kathmandu, Nepal, from December 18–24, 2012. The research participants consisted of 145 Nepal college students of age 18 years and above from three colleges of Kathmandu city. Descriptive statistics were used to analyze the demographic characteristics of the participants. The results of paired test showed that there was a significant difference ($t = -14.63$, $df = 144$, $p = 0.000$, $? = 0.05$) between the pre-test ($\bar{x} = 2.91$, $SD \pm .27$) and the post-test ($\bar{x} = 3.22$, $SD \pm .24$) after pro-life education. Phi correlation analysis between the demographic-attitude variables and the post-test demonstrated that education and knowing someone who had abortion are correlated. The study was consistent with other previous study in that education brings attitude change; to be specific, this study supports the hypothesis that there will be a change in abortion attitude after providing pro-life education. This study has laid the foundation on pro-life attitude using CDT. Further research on pro-life attitude and behavior change, concept analysis on pro-life and testing of pro-life attitude scale are recommended. The result of the study encourages health care providers and pro-life organizations to continue with the pro-life education with the hope of decreasing the number of abortions worldwide.</p>				

PODIUM PRESENTATIONS *(continued)*

College of Professions

NAME	POSITION	DEPARTMENT	ABSTRACT TITLE	ABSTRACT AUTHORS
Malia Amling	Undergraduate Student	Engineering and Computer Sciences	A Low-Cost Implementation of Vehicular Platooning Using PIC Microcontroller and Diversified Sensors	Malia Amling
	Collision avoidance systems have been developed and implemented in diverse ways. A result of collision avoidance technology is the development of a capability known as platooning. Platooning is the idea that one vehicle tracks and follows the movements of another. A major consideration in the implementation of platooning is the cost. In this project, a low-cost, but efficient implementation of a platooning system is designed and implemented using PIC18 microcontroller and various sensor technologies. Results from previous studies show that multiple types of sensors are far superior to using a single sensor in both the reliability and the cost. Therefore, ultrasonic sensors, IR, and RF sensors work independently in tracking the turns and distance, and then compete with each other to reach more accurate driving decisions. Low-cost PIC microcontrollers are selected as the major computing units. The experiments were performed on two microcontroller cars in a controlled laboratory environment. This low-cost implementation of vehicle platooning can be used to make the future of platooning vehicles on the highway more efficient and cost-effective. Also, the simplicity and ease of installation makes this system a good candidate for use in factories or other applications where it is beneficial for one machine to follow another.			
Malia Amling	Undergraduate Student	Engineering and Computer Science	Using Image Processing to Enhance Vehicle Safety	Malia Amling Martin Klein
	Passenger safety is critical in the design of modern cars. Safety features such as airbags usually deploy throughout the whole car. However, airbags deploying where seats are empty can cause unnecessary mess and obstructions for emergency crews. Therefore, it would be helpful if the cars had a way of sensing which seats are occupied. In lieu of having sensors in each seat, an image-processing based system can be implemented. With a camera imbedded into the rearview mirror of the car, the smart response system can scan the car once all the doors are closed and locate the number and location of passengers in the car. The sense and count portion of this system is an image-processing program written in MatLab. A wide-spread implementation of this technology would result in safer emergency response systems in cars. Cars would no longer have to mass deploy safety mechanisms but could deploy them in a targeted manner to avoid unnecessary deployment of safety features.			
Gregory Dye	Undergraduate Student	Engineering and Computer Science	Cyber-Warfare and Christian Ethics	Greg Dye
	With tension growing between the nations, a possible unseen cyber-war already started, and an ever changing state of computer capability, many questions have been raised about the ethics of cyber-warfare. This paper examines the history of cyber-warfare, making note of cyber-attacks both carried out by, and carried out against the United States. It also looks at the possible future of cyber-warfare, illustrating techniques used now and techniques possibly used in the future of cyber-warfare. Lastly, this paper synthesizes a Biblical worldview into this ever changing issue. The paper looks at the role of government, in both protecting its citizens and promoting their freedom. It also examines the rules of war, how they have applied in the past, and in what ways these rules should apply to the future.			
Josh Fleming	Undergraduate Student	Engineering and Computer Science	An Ethical and Technical Analysis of Nuclear Energy Production	Josh Fleming
	Facing the ever-growing pressure of global warming as well as high fuel prices, the demand of clean renewable energy is rapidly increasing with a momentum never witnessed before. One of such energy resources is biomass, e.g. wood chips, corn stalks, switchgrass, algae, wastes etc, which can be converted to fuel by biochemical or thermochemical methods. Common thermochemical conversion techniques like gasification and pyrolysis produce hot syngas or bio-oil with a high concentration of char particles in the products (typically 5~10 percent for gasification and 15~20 percent for fast pyrolysis), which should be removed before further refinements are possible. A relatively new method for char particulate removal from high temperature gas stream is the moving bed granular filter (MBGF), which captures char particles by passing the syngas through a bed of granules and reaches steady operation through continuous withdrawal of the filtration media with captured particles. It was found that there exists a critical granular flow rate, under which the operation of the MBGF may fail to reach steady state due to the continuous accumulation of char over time. On the other hand, the MBGF can maintain high filtration efficiency if is running at a granular flow rate above the critical value and in such situations the granular flow rate has no significant effect on the filtration efficiency. This discovery suggests that it is optimum to operate the MBGF at the critical granular flow rate. The current research presents a CFD study of the filtration process in a MBGF. The flow field of the syngas in the MBGF is simulated. The study is accomplished with the aid of commercial CFD software FLUENT and its powerful UDF feature. The mechanism of char accumulation is discussed and the critical granular flow rate is explored.			

POSTER PRESENTATIONS

College of Arts and Sciences

NAME	POSITION	DEPARTMENT	ABSTRACT TITLE	ABSTRACT AUTHORS
Calvin Anderson	Undergraduate Student	Science and Mathematics	Survival of Micas in a Turbulent Subaqueous Setting	Matthew S. Cheney Calvin J. Anderson
	<p>Micas frequently occur in purported eolian sandstones. Other experiments have shown that micas cannot survive eolian conditions, so we wanted to test how long they survive in a turbulent subaqueous setting. We performed an experiment over the course of several months to observe the survival rate of micas in silicate sand carried by turbulent water. The sand used was taken from the Sandhills of South Carolina, and contained mica flakes visible to the naked eye. We constructed a number of apparatuses throughout the course of this experiment. We attempted to churn the sandy water with magnetic stir bars on a magnetic stir plate, but this method ultimately failed due to the intense abrasional nature of the sand. Many variations of this apparatus were attempted. Variations included changing the amount of water, size of magnetic stir bars, speed of the magnetic plates, and volume of the beakers, among other things. We then set up a different apparatus by filling a large glass jar with a mixture of the sand and water. This jar was placed on its side, and rotated at a constant rate by a rock-tumbler motor. Samples were taken frequently. After 50 days, there were still visible pieces of mica in the sand. Mica flakes were visible in the turbulent water as well. The micas do not appear to have eroded very much at all in 50 days. The sand travelled over 950 km in that time. The presence of mica in the sand, after being churned by water for an extended period of time, indicates that turbulent sandy water does not erode mica flakes rapidly. Therefore, micas last considerably longer in subaqueous environments than in eolian environments. This finding is significant because many sandstone formations, which contain abundant micas, have been conventionally interpreted as having been deposited over a long period of time in an eolian setting. The presence of mica in these sandstones suggests that geologists need to reconsider their depositional setting.</p>			
Christian Hayes	Undergraduate Student	Science and Mathematics	A Survey of the Dissolved Oxygen Content in Cedar Lake	Christian Hayes Andria Quirindongo Benjamin Wachter
	<p>Photosynthetic rates of algae in small lakes vary according to the concentration of dissolved oxygen (DO) in the water and the amount of direct sunlight hitting the surface. In spring of 2012, we conducted a five-week survey of dissolved oxygen concentration, local light level variation, and temperature fluctuation around Cedar Lake to determine how direct solar radiation (PAR) and temperature affect photosynthetic production and dissolved oxygen concentration. We expected that dissolved oxygen levels in the lake would be directly related to the amount of sunlight hitting the system rather than to the local water temperature on any given day. From our data and analysis, however, we concluded that dissolved oxygen levels were correlated, not with the amount of solar radiation hitting a given sector of the Lake, but with the average temperature of the different collection sites.</p>			
Christian Hayes	Undergraduate Student	Science and Mathematics	Fish & Macroinvertebrate Species Diversity in Restored and Unrestored Forks of Massies Creek, Ohio	Christian Hayes Amelia Lyons Nathan Reed Rebecca Wadman Mark Gathany
	<p>Background/Questions/Methods: In 2006 the Greene County, Ohio, Sanitary Engineering Department in conjunction with the Greene Soil and Water Conservation District, and Malcolm Pirnie, Inc, implemented a \$1.7 million stream restoration project along a 2.2-mile section of the North Fork of Massie Creek and the Little Miami River. Prior to restoration the stream exhibited high water velocities, extreme channelization, and a high rate of bank erosion. The goal of this project was to restore the stream to a more natural condition and improve water quality for downstream cities with the specific intent of reducing phosphorus inputs from fertilizer applications. This study, initiated by Cedarville University in fall of 2011 by undergraduates, had two objectives: (1) to establish a baseline with which to monitor future changes in the biotic community and (2) to quantify the effect of the restoration on fish and macroinvertebrate populations by comparing the restored North Fork with the unrestored South Fork of Massie Creek. Results/Conclusions: Our data revealed a significantly ($p < 0.05$) greater abundance of fish in the unrestored South Fork than the restored North Fork. Shannon (S) and Simpson (D) indices revealed that fish diversity was poor in both Forks. These greater abundance and lower diversity levels were attributed to a large population of intolerant large-mouth bass in the unrestored South Fork. Macroinvertebrate diversity was found to be similar between the unrestored South Fork and restored North Fork. Taken together these data suggest that the stream restoration that was completed in early 2010 has yet to significantly improve the biodiversity of the stream. This work will therefore serve as a baseline with which to continue monitoring these streams for changes in the future.</p>			
Megan Helmbrecht	Undergraduate Student	English, Literature, and Modern Languages	Hip-Hop: Linguistic Death to Standard English	Megan Helmbrecht
	<p>This research project evaluates the impact that hip-hop music has made on the English language and its speakers today. As technology has improved and become more ubiquitous in the US, the music industry is able to reach younger generations. Popular music now influences the mindset and speech of adolescents. This study examines three common traits found in hip-hop songs: vulgarity, grammatical errors, and jargon. All three characteristics must be able to be heard over the radio at any given time. Thus, as it relates to grammatical errors, I only examined errors that orally impact their listeners like word choice or subject verb agreement. With these traits in mind, I analyzed the Top 10 hip-hop songs that have been most often played on the radio according to radio statistics. In addition to current hip-hop data, I also researched past statistics within the last five years in order to gain a range of artists that have been popular over the years in society. With this research, I provide a critical analysis of the amount of non-standard English that permeates the English language through the medium of hip-hop music.</p>			
Nathan Hnatiuk	Faculty	Science and Mathematics	Progress Towards a Water Soluble Lithium Ion Sensor	Nathan Hnatiuk Tyler Hacker Eric Huseman Ericka Kistler Kevin Stockdale John Throgmorton
	<p>The use of Lithium salts is growing at a rapid rate. With Lithium ion battery technology booming and Lithium salts used for the treatment of psychosis, the need for a quick, affordable, and easy Lithium ion detection method is growing. Currently, there are very few ways to optically detect the Lithium ion in aqueous solutions. Herein, we describe the progress towards a water soluble, fluorescent Lithium ion sensor utilizing a 4,4-difluoro-4-bora-3a,4a-diazaindacene (BODIPY) fluorophore core.</p>			

POSTER PRESENTATIONS

College of Arts and Sciences

NAME	POSITION	DEPARTMENT	ABSTRACT TITLE	ABSTRACT AUTHORS
Matthew Ingle	Faculty	Science and Mathematics	The Correlation Between Landscape Fragmentation and Parasite Prevalence	Matthew Ingle Stephen Dunbar Jaynee Bartsch Katherine Guffey Cole Knox Ashlie Nolan Carrie Rowlands Emily Trigg Melinda Vasser
				Raccoons (<i>Procyon lotor</i>) are the final host for raccoon roundworms (<i>Baylisascaris procyonis</i>) (Page et al., 2005). Raccoon roundworm is the leading cause of a dangerous neurological disease known as larva migrans encephalopathy (Blizzard et al., 2010). Land fragmentation occurs when natural environments are broken up by urban or agricultural landscapes. Raccoons thrive in urban environments (Randa & Yunger, 2006). Furthermore, raccoons in agricultural settings forage over larger areas than do raccoons in urban settings. Page et al. (2005) demonstrated that land fragmentation affects concentrations of <i>Baylisascaris procyonis</i> parasites in intermediate hosts. We calculated the prevalence of raccoon roundworm in 10 townships of Greene and Clark Counties by necropsying 226 raccoon intestines. We measured prevalence as the number of raccoons infected with roundworm divided by the total number of raccoons sampled. Using ArcGIS and Fragstats, we developed a method of quantifying the fragmentation in each township. We ran a linear regression model to determine whether or not fragmentation is a valuable factor to predict and estimate parasite prevalence. We determined that the degree of fragmentation varied between the sampled townships, and that some of the variation in parasite prevalence was accounted for by the variation in fragmentation. These results will help us shape management and conservation strategies for the raccoon and roundworm.
Matthew Ingle	Faculty	Science and Mathematics	The Impacts of Parasite Prevalence on the Diet of the Host	Matthew Ingle Stephen Dunbar Jaynee Bartsch Katherine Guffey Cole Knox Ashlie Nolan Carrie Rowlands Emily Trigg Melinda Vasser
				Raccoons (<i>Procyon lotor</i>) are the final host for raccoon roundworms (<i>Baylisascaris procyonis</i>) (Page et al., 2005). Raccoon roundworm is the leading cause of a dangerous neurological disease, known as larva migrans encephalopathy (Blizzard et al., 2010). Raccoons are omnivorous animals, and rely on various food items. Page et al. (2011) found that raccoons eat whatever food resource is most convenient and abundant. Raccoons in similar habitats have similar diets, regardless of the geographical closeness of the habitats (Rulison et al., 2012). We analyzed the diets of necropsied raccoon from 10 townships of Clark and Greene Counties. We massed the stomachs, and removed their contents. We analyzed the contents to determine whether or not there were vertebrate, invertebrate and plant tissues in the stomach. We recorded these data and classified the material according to class, order and family, when possible. We ran a linear regression model to determine whether or not parasite prevalence is a valuable factor to predict raccoon diet. We found vertebrate tissues had a higher prevalence in townships with higher parasite prevalence. We also determined that some of the variation in prevalence of diet item was accounted for by the variation in parasite prevalence. These results will help us design a plan to reduce the prevalence of raccoon roundworm in Clark and Greene Counties.
Heather Kuruvilla	Faculty	Science and Mathematics	Vertebrate Neuronal Chemorepellents, Semaphorin 3C and Netrin-1, Are Chemorepellents in <i>Tetrahymena Thermophila</i>	Caleb Alley Chris Griffin Josie Hein Daniel Kohl Brad Schmidt David Yoder Heather Kuruvilla
				During vertebrate development, neuronal growth is guided by chemical signals. Chemoattractants encourage neuronal growth cones to form, while chemorepellents cause growth cone collapse. Integration of these signals allows for proper neural positioning in the developing organism. Not all signaling pathways are clear-cut, however. Netrin-1, for example, can function as either a chemoattractant or a chemorepellent, depending upon the cell type involved, the signals the cell has previously received, and the concentration of the signal. Netrin-1 primarily signals through a G-protein mediated receptor via the adenylyl cyclase pathway. The semaphorins mainly serve as chemorepellents and as immune signals in vertebrates. However, signaling through the semaphorins is not well understood. <i>Tetrahymena thermophila</i> are free-living, ciliated eukaryotic organisms that are often used as a model for showing behavioral responses to both chemoattractants and chemorepellents. A number of polycationic peptides function as chemorepellents in this organism, including lysozyme, VIP, PACAP, nociceptin, substance P, and ACTH derivatives. In the current study, we used two polycationic peptides derived from the vertebrate neuronal chemorepellents, semaphorin 3 C and netrin-1, in order to determine whether they were chemorepellents in <i>Tetrahymena thermophila</i> . Both peptides were chemorepellents in <i>Tetrahymena thermophila</i> . Semaphorin 3C peptide showed chemorepellent activity with an effective concentration of approximately 10 micromolar. Netrin-1 peptide showed chemorepellent activity over a range of concentrations from micromolar to nanomolar. However, there was a great deal of variability in the response to netrin-1. Further characterization of the pathways involved in the signaling of these repellents will allow comparison between ciliate and vertebrate signaling, and may help us better understand vertebrate development.

POSTER PRESENTATIONS *(continued)*

College of Arts and Sciences *(continued)*

NAME	POSITION	DEPARTMENT	ABSTRACT TITLE	ABSTRACT AUTHORS
Jennifer Lyon	Undergraduate Student	Science and Mathematics	Chaos in a Competitive Species Model	Jennifer Lyon
<p>This presentation looks at a symmetrically coupled logistic equation, proposed by Lopez-Ruiz and Fournier-Prumaret, that mimics the competitive interaction between two species. For a certain range of values for an interaction variable, the two species can coexist. The calculation of a Lyapunov exponent, however, shows that the model will lead to chaos, making it impossible to predict the outcome of the interaction between the two species for certain values of the interaction variable.</p>				
Dylan McKeivitt	Undergraduate Student	Science and Mathematics	Analysis of California Coastal Dune and Beach Sand Samples	Dylan J. McKeivitt
<p>Samples of dune and beach sand from four locations along the California coast were collected and analyzed through sieving, XRD, and thin section. The mineralogy, average grain size, sorting, and average rounding values of feldspar and quartz grains were studied. The small sample selection and resulting data field do not allow significant conclusions to be reached, yet suggestions based on the data about processes affecting coastal sand are discussed. It was determined that further study and experimentation in each of these areas is needed: eolian depositional processes may preferentially retain quartz and lose feldspars; an increase in sorting and decrease in grain size from beach to dune locations may be due to eolian processes; there may exist a sorting "threshold" beyond which eolian processes will not increase sorting; preferential transportation of rounded sand grains may occur within a few feet of the waterline, even on the beach, and continuing movement to the dunes might result in no further change in rounding; there may be a rounding "threshold" for different mineral grains beyond which abrasion and possibly preferential transportation become insignificant; chemical solution or deposition, depending on the amount of moisture and its composition, may factor into shaping sand grains along coastal dunes and beaches; and eolian transportation of mica grains over relatively short distances (hundreds of meters) may result in a decrease in concentration and long-axis length.</p>				
Kaleb Pauley	Faculty	Science and Mathematics	Mechanism of Upregulated phagocytosis by miR-146a in Sjögren's Syndrome	Kaleb M Pauley Robin R Hrdina Katherine M Kohl Benjamin I Luce Jacob L Nafziger Heidi Zwiebel
<p>Sjögren's Syndrome (SJS) is an autoimmune disease characterized by autoimmune attack and damage of exocrine glands, especially salivary and lacrimal glands. The resulting apoptotic cell death in these glands leads to severe dryness in the mouth and eyes. Previous research has shown that a microRNA, miR-146a, is upregulated in SJS patients compared to healthy individuals. Further investigation into the function of upregulated miR-146a suggested a role in upregulating phagocytosis. The goal of this study was to further elucidate the relationship between miR-146a and phagocytosis. Our hypothesis states that miR-146a inhibits the effects of C1Q binding protein (C1QBP) thus allowing C1Q to mark apoptotic cells thereby enhancing their phagocytosis. We first set out to develop a phagocytic assay that could be used to test this hypothesis. Apoptosis was induced in Jurkat cells by UV irradiation or etoposide treatment, and THP-1 monocytes were differentiated into phagocytic macrophages. Apoptotic cells were labeled with propidium iodide, and phagocytic activity was measured using a fluorescent plate reader. C1QBP gene expression was analyzed in THP-1 cells by qRT-PCR. Using varied irradiation times, we determined the UV light was not strong enough to induce apoptosis in a reasonable amount of time. To resolve this, etoposide was used to effectively induce apoptosis in Jurkat cells. Significant phagocytosis of apoptotic Jurkats was observable. Next, qRT-PCR was used to analyze C1QBP gene expression in THP-1 cells. Our results indicate that either C1QBP was not expressed by THP-1 cells or the primers were not working properly. Further experiments are needed to resolve this issue. Optimization of a phagocytic assay to study the relationship between miR-146a and phagocytosis was successful and it will be utilized future studies. C1QBP expression must first be established in THP-1 cells to test our hypothesis that C1QBP is the link between miR-146a and phagocytosis.</p>				
Jonathan Proctor	Undergraduate Student	Science and Mathematics	Separation in Spaces and Hyperspaces	Jonathan Proctor
<p>This poster describes the topological relationships between the separation of a space and the separation of its hyperspace under the Vietoris topology. In particular, we focus on the first four separation properties in both the space and the hyperspace. We found that many separation properties of the original space will transfer to the hyperspace, but very few of the separation properties of the hyperspace transfer back to the original space. With some basic assumptions about the separation of the original space, we found that more of the separation properties of the hyperspace can be transferred back to the original space. We provide proofs of all of these results, and we also present counterexamples to demonstrate that these relationships are as strong as they can be in the general case.</p>				
John Whitmore	Faculty	Science and Mathematics	Temporal Patterns in 'Living Fossils'	John H. Whitmore
<p>"Living fossils" are taxa which are living today and can be found in the ancient rock record. Well-known examples include the ginkgo tree (Ginkgo, 252-0 Ma), the coast redwood (Sequoia, 151-0 Ma), horsetails (Equisetum, 360-0 Ma), a brachiopod (Lingula, 488-0 Ma), an annelid worm (Spirobis, 488-0 Ma), and a mussel (Mytilus, 418-0 Ma). Many living genera have morphologically close sister taxa including the coelacanth fish (Latimeria) with Coelacanthus (318-247 Ma) and the horseshoe crab (Limulus) with Limuloides (419-416 Ma). A recent query of the Paleobiology Database (pbd.org) was completed to find how many living fossil genera have been reported: 99 were found from the Paleozoic, 548 from the Mesozoic and 3,582 from the Cenozoic, for a total of 4,229. The database is continually being updated, so this is surely an underestimate. The data were graphed using 10 Ma bins. The graph shows a spike in the number of genera at the K-T boundary; a time which corresponds to the transition from Flood to post-Flood rocks, about 4,300 years ago. From an old earth/evolutionary perspective "living fossils" are an unexpected problem. Evolution demands change over time, but some genera remain unchanged (maintain stasis) for tens or hundreds of millions of years. Furthermore, why are the numbers of living fossil taxa "flat" in Paleozoic and Mesozoic times with a sudden spike during Cenozoic times? A Creation model might answer this observation as a result of rapid diversification of organisms following the Flood. Relatively few genera that were alive before the Flood were able to survive, morphologically unchanged. Rapid diversification may have been due to post-Flood climate changes or the opportunity to fill new niches in the empty post-Flood world. The biblical "kind" is most commonly thought to be at the taxonomic level of the family; so when similar work is completed at this level, a more even distribution is expected through time.</p>				

POSTER PRESENTATIONS *(continued)*

College of Health Professions

NAME	POSITION	DEPARTMENT	ABSTRACT TITLE	ABSTRACT AUTHORS
Chelsea Craig	Undergraduate Student	Nursing	Risks Associated with IM Injections in the Dorsogluteal Site	Chelsea Craig Joanna Huschilt
<p>Purpose: To review current literature in safe practice of dorsogluteal and vertagluteal injections. Methods: Literature published between 2007 and 2012 was reviewed using CINAHL and PUBMED and Academic Search Complete using key words "ventral gluteal," "dorsogluteal," "intramuscular injection," and "sciatic nerve" under the parameters of full text and English language. Findings: The dorsogluteal site should not be used due to risk of sciatic nerve injury and varying amounts of adipose tissue covering the dorsogluteal muscle. The alternate site of the ventral gluteal muscle should be used. Conclusion: The dorsogluteal site is unsafe and therefore the ventral gluteal site must be used. Clinical Relevance: Research findings show that harm can be done when an intramuscular injection is not given correctly in the dorsogluteal site so nurses should become confident in giving an intramuscular injection in the ventral gluteal site to avoid harming patients.</p>				
David Banz	Undergraduate Student	Kinesiology and Allied Health	Cerebral Palsy: an Overview and Considerations for Resistance Training in Children With Spastic Cerebral Palsy	David Banz
<p>The group of non-progressive motor disorders that fall under the term Cerebral Palsy has created significant needs for individuals, households, clinicians, researchers, and society as a whole. Because of the diversity of Cerebral Palsy, the reported prevalence rates, risk factors, causes, and effects greatly vary depending on the cohorts used in each study. The neuromuscular disturbances present in individuals with Cerebral Palsy are caused by lesions in the cranial motor system and have posed many questions in regards to the most effective treatment options. Some such treatments that are used currently include speech and language therapy, orthotics, surgical procedures, pharmacological treatments, and physiotherapy. One method of physiotherapy, resistance training, has been used in children with spastic Cerebral Palsy, but its efficacy has been questioned recently. Thus, the aim of this study is to review the literature on the key aspects of Cerebral Palsy in order to develop an overall understanding of the disorders the term entails and to review the controlled studies done testing the efficacy of resistance training in children with spastic Cerebral Palsy. Nine controlled experimental studies were included in the literature review on resistance training efficacy and three literature reviews were referenced. The results indicate that resistance training cannot be determined decisively in children with spastic Cerebral Palsy, and further research should focus on resistance training in adults with Cerebral Palsy and further development in training protocols.</p>				
Elisabeth Blair	Undergraduate Student	Nursing	The Neuroprotective Effects of Therapeutic Hypothermia in Post-Cardiac Arrest Patients: A Systematic Review of the Evidence	Elisabeth Blair Ashley Short
<p>Background: Therapeutic hypothermia is a relatively new supplemental treatment for patients experiencing return of spontaneous circulation after non-traumatic cardiac arrest. Typical treatment uses normothermia, and the purpose of this study was to determine if therapeutic hypothermia is more beneficial. Methods: We searched PubMed, Medline, CINAHL, and ScienceDirect in order to review non-randomized and randomized clinical trials, systematic reviews, and meta-analyses on the risks and benefits of therapeutic hypothermia. We also interviewed an RN and a paramedic to learn the current protocols in-hospital and pre-hospital. Results: Five of the nine articles used concluded that therapeutic hypothermia is significantly beneficial, while the other four determined that more research is needed. From the interviews conducted, we determined that therapeutic hypothermia is not implemented to the extent that research suggests. Conclusion: Although further research is needed, therapeutic hypothermia was found to have either beneficial or neutral effects on the patient, and there is no clinically significant difference in starting the therapy pre-hospital or in-hospital. By continuing research to determine the most effective temperature, cooling method, and duration of treatment, and increasing education of health care professionals, more lives can be saved through the implementation of therapeutic hypothermia.</p>				
Jerilyn Cox	Undergraduate Student	Nursing	Early vs. Delayed Umbilical Cord Clamping	Jerilyn Cox Katie Grayton Kristen Givens
<p>Nearly four million infants are born annually in the United States. Events during birth can have life-long implications. Early cord clamping is associated with a decreased risk of jaundice, whereas delayed cord clamping is associated with a decreased risk of anemia. Parents deserve knowledge and autonomy concerning care of their infants.</p>				
Anna Downing	Undergraduate Student	Social Work	Female Genital Mutilation	Anna Downing
<p>This paper will contend that female genital mutilation in Sub-Saharan Africa, though a widely accepted cultural practice is unethical because it violates Kant's second categorical imperative. Female genital mutilation (FGM) is the product of a male dominated society that wishes to control the sexual activity of its women and to maintain its power over them. The practice of FGM uses woman as a means to a culturally desired end and infringes the intrinsic worth of women. FGM should be outlawed because it violates Kantian ethics. This practice should not be ignored based on cultural relativism. I researched academic databases, reviewed scholarly literature, and studied Kantian ethics and cultural relativism. I also read personal accounts of FGM. According to Kant, all human beings should be an end in their own right and not a means to an end for someone else's desired outcomes. This approach justifies the discontinuation of this abusive practice, so that women can fully experience their intrinsic value.</p>				

POSTER PRESENTATIONS *(continued)*

College of Health Professions *(continued)*

NAME	POSITION	DEPARTMENT	ABSTRACT TITLE	ABSTRACT AUTHORS
Bethany Hotchkiss	Undergraduate Student	Nursing	Kangaroo Mother Care for Premature and Low Birth Weight Infants	Emma Rahn Bethany Hotchkiss
<p>Due to an overwhelming number of babies born prematurely each year, new interventions are being introduced and studied. Kangaroo Mother Care (KMC), the prolonged skin-to-skin contact between mother/father and the infant, has been studied and has been shown to be a more beneficial alternative to care for both the infant and the parents. The purpose of this paper is to compare the holistic outcome of KMC to that of conventional care (incubators and radiators). The research team consisted of two Cedarville nursing students, Emma Rahn and Bethany Hotchkiss. For our paper, the Iowa model was used to guide our research. Four triggers were assigned. There are two knowledge based triggers: new research and philosophies of care, and two problem based triggers: financial data and identification of the clinical problem (Titler, 2011). The research databases searched were PubMed and CPS (Canadian Paediatric Society, 2012). We used the PICO model to guide our selection of articles. The population we focused on was made up of premature and low birth weight infants and their parents. The intervention we are proposing is KMC, and it is being compared to conventional care strategies. The pertinent outcomes we looked for were the physical and psychological effects on the mother and baby. In the end, eight articles were selected. Overall, KMC proved to be more beneficial than conventional care in eight areas. When KMC was utilized, there was a decrease in infant mortality, morbidity, cost of care, and future health and behavioral problems in the first year. Also, there was an increase in parental involvement, maternal health, infant growth, and exclusive breastfeeding. It is clear that KMC promotes physical and psychological well-being for premature infants and their parents. After reviewing all information found, we conclude that KMC is more beneficial than conventional care and should be implemented whenever possible and appropriate in both developed and developing countries.</p>				
Katherine Langton	Undergraduate Student	Psychology	Qualitative Perspectives on Contraceptive Usage From Christian College Students	Katherine Langton Jamie Lovett Patricia Klay Joel Israel Amanda Burger
<p>Christian and secular views of health often do not align, specifically in the area of contraceptives and sexual activity. The Christian community has traditionally believed that abstinence is the healthiest choice and has often rejected contraceptives as a viable option for sex outside of a marriage context. However, in today's culture of casual sex, sexually transmitted diseases, and unwanted teenage pregnancy, contraceptives seem to be a necessary part of a healthy lifestyle for many individuals. This study delves into the attitudes of Christian college students about these topics to further understand why the attitudes of the religious differ from the secular world. A qualitative research model allowed us to obtain rich information that is not possible to the same degree with quantitative research. Our goal was depth rather than breadth, as we wanted to understand at a deeper level why Christian students have the beliefs and attitudes they do about contraceptive usage. Twenty randomly selected students (11 females, 9 males) from a Cedarville University General Psychology class were interviewed individually. There were four areas of interest in this study: general questions about sex, their sex education history, the moral and health implications of contraceptives, and scenario questions designed to illicit reactions to situations involving risky sexual behavior and/or contraceptive use. We found that there is a seeming lack of sex education, and strong moral opinions on contraceptive use and sexual activity that depend on the context of their usage. This study reveals interesting findings about the thoughts and attitudes of Christian students about contraceptives and sexual behaviors. It is beneficial for religious communities to see where traditional education methods are falling short and to understand the viewpoint of a group of people so that when controversy rises there is a deeper understanding of the opposing beliefs and attitudes.</p>				
Katherine Marshall	Undergraduate Student	Nursing	Evaluating the Use of 5 percent Human Albumin vs. Normal Saline for the Treatment of Hypotensive Crisis in Postoperative Patients	Katherine Marshall Rachel Parrill Amy Voris
<p>Human albumin solutions and saline solutions are used frequently in emergent and post-surgical patients to stabilize extreme hypotension due to fluid loss. The problem that surrounds this project is that 5 percent human albumin solution is being used as a resuscitative treatment for hypotension while exposing patients to additional risks as opposed to normal saline which has been found to be at least as effective as 5 percent human albumin solution at treating hypotension (Roberts, et al., 2011). A second consideration in the use of human albumin versus normal saline is cost. The cost of one 250 ml vial of 5 percent human albumin is \$41.00 (FFF Enterprises, 2011). The cost of one 250 ml bag of 0.9 percent normal saline is \$1.30 (PMI, 2012). At this cost ratio, over 31 bags of 0.9 percent normal saline could be purchased and safely used to provide patient care for the cost of one 250ml vial of 5 percent human albumin. In order for nurses to operate from an evidence-based perspective, we need to be aware of how to introduce, develop and evaluate evidence-based practice. For this project, the current research related to the effect of human albumin vs. normal saline in post-surgical patients who experience extreme hypotension will be reviewed. This comprehensive review of the literature will be the basis for the development of an evidence-based policy for surgeons to consider.</p>				
Amanda Miller	Undergraduate Student	Nursing	Adherence to Clean Intermittent Catheterization Treatment in Pediatric Patients: A Comprehensive Review of Literature	Amanda J. Miller Ashley R. Thompson
<p>Objectives: There are many pediatric patients who have to perform clean intermittent catheterization (CIC) for the rest of their lives but fail to do so on a daily basis. Non-adherence to CIC causes many urological complications, including UTIs, epididymitis, and decreasing renal function. The objective of this study was to identify factors that potentially promote or prevent adherence to CIC in pediatric patients. Methods: CINAHL and PubMed were searched using the keywords: urinary catheterization, clean intermittent catheterization, pediatric, adherence, and CIC. We put limits on the search for full-text articles in English that were published between 2007–2012. A total of 83 articles were found and 11 articles were kept. We included articles that focused on CIC and the quality of life for CIC patients of all ages. We excluded articles that focused on technical aspects of CIC instead of patient experience. Results: Our review suggests that there are many barriers to adherence to CIC. The nursing intervention that can have the most positive impact on CIC adherence is individualized education that addresses the named barriers. Conclusions: In order to improve and maintain adherence to CIC in pediatric patients, the nurse should recognize and manage potential barriers to CIC according to each patient's need. Individualized education should address all applicable barriers and include possible solutions. Recommendations: There were few studies done for the pediatric population and many of the studies that we found were at the qualitative, descriptive level. More research at the experimental level is necessary in order to support and test these findings.</p>				

POSTER PRESENTATIONS *(continued)*

College of Health Professions *(continued)*

NAME	POSITION	DEPARTMENT	ABSTRACT TITLE	ABSTRACT AUTHORS
Carole Raubach	Undergraduate Student	Nursing	The Value of Time	Carole Raubach Megan Jahnke
	<p>This project was developed to improve the function of Rocking Horse Community Health Clinic (RHCHC) in order to provide affordable and accessible quality healthcare to the low income families, medically indigent, uninsured and underinsured individuals in Clark County. We worked with the clinical staff, including office administrators, nurses, and doctors to identify priorities of the clinic staff and clients. The staff shared their desire to undergo a program analysis to identify areas that are effectively meeting their goals as well as areas needing improvement. We conducted interviews and spent several hours of observation at the clinic in order to construct a logic model. Upon further evaluation of the logic model, we identified a deficit in patient education concerning chronic disease management. We concluded that an ineffective use of time was a contributing factor to this deficit. Using a time management tool called a 'value stream map', which is based upon lean principles, we identified areas in the patient flow process where significant time was lost. At the end of our project we presented the logic model and the value stream map to the RHCHC staff. We recommended the logic model as a framework for further goal setting by the staff and used the value stream map to show where wasted time could be converted to valuable time spent on patient education.</p>			
Nichole Reaver	Undergraduate Student	Psychology	Attribution of Personality Based on Attractiveness	Nichole Reaver Dr. Chi-en Hwang
	<p>This study attempted to explore the relationship between physical attractiveness and personality attribution. One hundred and eighty undergraduate students attributed personality traits (focusing on extroversion) to two attractive and two unattractive female photographs, and they were also asked to rate themselves on the Big Five Inventory. We hypothesized that extroversion is related to attractiveness and people would attribute characteristics similar to their own to attractive photographs. Results confirmed our hypothesis that attractive photographs received higher ratings on extroversion, and there was a positive correlation between self-reported extroversion score and extroversion score assigned to attractive people.</p>			
Marguerite Ricci	Undergraduate Student	Kinesiology and Allied Health	Presence of Perfectionism Across Athletes and Non-Athletes	Marguerite Ricci April Crommett
	<p>It takes a combination of many things to make up a successful athlete. Simply relying on God-given skill and physical build will only take one so far. In the same way, a passion for sport, consistent mental focus on the details, and good sportsmanship won't get a player off the bench. To be successful, an athlete has to incorporate a range of characteristics that allow them to perform, lead, work with others, and learn from mistakes. Finally, at the foundation of a successful athlete there must be strong motivation. Motivation is what keeps the athlete moving forward and striving to win. Although this can make one successful for a time, if an athlete hopes to continue with such a success, he will make intentional goals and set appropriate standards to strive for that will continue to keep him on the path of improvement and achievement. This can be summed up in one word: discipline. Without discipline, an athlete won't act on his skills, talents, and ambitions in a way that causes growth and development. This discipline can be measured in terms of perfectionism. Although literature indicates that perfectionism plays a role in many aspects of an athlete's performance, whether perfectionism differs between athlete and non-athlete populations has not been researched. The purpose of this project was to examine whether perfectionism is a trait that is more prominent in athletes than non-athletes. Twenty-three freshman students participated in the study by taking the Front-MPS online perfectionism survey. Results indicate that athletes and non-athletes do not differ in their level of perfectionism.</p>			
Lucia Sizemore	Undergraduate Student	Social Work	The Natural Laws of Commercial Surrogate Parenting	Lucia Sizemore
	<p>The purpose of this paper is to show that Commercial Surrogate (CSP) parenting is a violation of the natural goods of pregnancy and is incompatible with human flourishing. Natural Law ethics undergird these claims. I have utilized the history of surrogacy and the current legal framework in the United States to develop an understanding of CSP practices. A distinction between traditional adoption practices and CSP is made regarding the non-surrogate parents moral complicity in these situations. Study also reveals that the natural bonding between mother and child is also interrupted for monetary gain.</p>			
Bethany Teixeira	Undergraduate Student	Nursing	Pulse Oximetry Testing for Screening for Congenital Heart Defects in Newborns: A Literature Review of the Effectiveness and Accuracy	Bethany Teixeira Amanda Custer
	<p>Purpose To examine if pulse oximetry testing is a practical and reliable method to screen for congenital heart defects (CHD) and increase the early detection of complex CHD in asymptomatic newborns. Design Findings were searched using Medline and Pubmed with the key words "pulse oximetry", "newborn", and "congenital heart disease". Methods A literature review was conducted and eight articles that pertained to newborns, pulse, oximetry, and CHD were carefully analyzed. An RN from Miami Valley Hospital in Dayton, Ohio was interviewed regarding their specific policies about this topic. Findings Pulse oximetry testing has a sensitivity of 76.5 percent and specificity of 99.9 percent. All articles confirmed the test is moderately accurate for CHD detection and high for a negative screen for CHD. Studies in the articles used both the hand and foot for screening. A positive test cut off O2 range of 94 percent -96 percent was reported in most articles with the majority of 95 percent. Screenings were performed after birth either at 24 hrs, 6-12 hrs, or discharge. Type 2 errors were noted and decreased when screened 24 hours. after birth. A retest was performed if the test was under the O2 saturation cut off, a physician was consulted, and an echocardiogram was ordered. Conclusions It has been determined that using a pulse oximetry is a simple, non-invasive, and cost-effective test that increases the early detection of critical CHDs and thus should be implemented on all newborns. Clinical Relevance The test should be performed after the infant is 24-hours-old and can be applied to either the hand or foot. In order to receive an accurate reading, the pulse oximetry should be applied until threshold is reached. If the saturation is above 95 percent the test will be charted negative for CHD. However, if the saturation is below 95 percent then it should be retested and if it is still below 95 percent, further evaluation with an echocardiogram and clinical examination by a physician is required.</p>			

POSTER PRESENTATIONS *(continued)*

College of Health Professions *(continued)*

NAME	POSITION	DEPARTMENT	ABSTRACT TITLE	ABSTRACT AUTHORS
Lindsay Tucholski	Graduate Student	Nursing	A Descriptive Study of Service-Learning on Social Justice and Leadership Attitudes in Senior B.S.N. Students	Lindsay Tucholski Jan Conway Rachel Parrill
	<p>The complexity of nursing care today requires nursing students to be ready to assume high levels of professional practice at the time of graduation. Benner, Sutphen, Leonard, and Day (2010) call for a radical transformation in nursing education in order to prepare graduates for this level of practice. In considering this call for transformation, the pedagogy of service-learning (SL) embodies four paradigm shifts proposed by Benner et al. (2010). Service-learning is also proposed as a pedagogical method for educating nurses by the American Association of Colleges of Nursing (AACN, 2009). The Essentials of Baccalaureate Education for Professional Nursing Practice (AACN, 2008) is the expected standards for baccalaureate nursing curricula. Elements of The Essentials include a focus on leadership and the development of professionalism and professional values, which include social justice. Though SL has been implemented in many educational settings across the United States, there continues to be a lack of quantitative research on service-learning to qualify it as an evidenced-based practice. The purpose of this study was to assess changes in attitudes related to social justice and leadership for students enrolled in a senior level Care of Populations' course at Cedarville University after completing a 60-hour service-learning experience. Fifty subjects completed the Service-Learning Self-Evaluation Tool (SLSET) before and after the learning experience. The findings are useful for nursing education in providing supportive evidence for the continued use of service-learning as a pedagogical method.</p>			
Andrea VanMeter	Undergraduate Student	Nursing	Let's Focus on Fatherhood	Andrea VanMeter
	<p>Abortion is one of the most controversial issues of our time. In America alone, it has featured prominently in nearly every political race since Roe v. Wade in 1973. What about other countries of the world? Abortion laws vary from place to place, but my focus is on the country of Mexico. Male dominance plays a powerful role in promoting the acceptability of abortion in Mexico; therefore the Roman Catholic Church should focus more on fatherhood in changing this social ethic. Abortion has always been illegal in Mexico. In April, 2007, that all changed. Why? The majority of Mexican gynecologists (85 percent) object to abortion. Then why was abortion made legal? This paper will address these questions, and propose a potential answer to the problem. Mexico is a male-dominated society. Women do not have the same respect as men, nor are they able to make important decisions. Since the Roman Catholic Church is a dominant factor in Mexico, the church should challenge men to become better husbands and fathers. Research has shown that when the father supports a pregnancy, women are less likely to abort. A proactive Roman Catholic Church that could train men in their God-given role could reduce or even eliminate the problem of abortion in Mexico.</p>			
Andrea VanMeter	Undergraduate Student	Nursing	Prevention of Postpartum Depression Related to Mode of Birth Delivery	Andrea VanMeter Ashley Palumbo
	<p>Postpartum depression (PPD) is defined as "moderate to severe depression in a woman after she has given birth. It may occur after delivery or up to a year later. Most of the time, it occurs within the first three months after delivery" (Merrill, 2010, p.1). "... 10 to 20 percent of women in the U.S develop a more disabling and longer-lasting disorder called postpartum depression in the first year after childbirth that often impairs their ability to care for their babies" (Gaschler, 2008, p.1). The topic of this review of literature is the connection of postpartum depression and the correlation to mode of delivery, specifically cesarean section. The population of interest for this topic is soon-to-deliver mothers and postpartum mothers. The interventions needed for practice are increased nurse education of risk factors and signs and symptoms of postpartum depression with women who are at higher risk in order to better provide preventative methods to postpartum depression. Comparisons made include previous actions on postpartum depression such as treatment after PPD develops versus the prevention of postpartum depression by screening for risk factors, educating women, and providing care to ensure that the delivery process is as least stressful as possible. The outcomes needed are to increase prevention of postpartum depression by identifying risk factors and increased nursing education to identify and eliminate as many risk factors as possible.</p>			
Rachel Yutzy	Undergraduate Student	Social Work	Homosexuality and the Church	Rachel Yutzy
	<p>The purpose of this research is to analyze the ethical practices of the evangelical church in regard to their treatment of the Lesbian, Gay, Bisexual, Transgender, and Queer (LGBTQ) population. The Evangelical Church has maltreated and discriminated, not only within its own circles, but also perpetuated such behaviors in secular society. In this paper, I will critique the church in light of virtue ethics as exemplified by Mother Teresa. Virtue ethics is an ethical approach that emphasizes the character of the moral agent rather than rules or consequences. Mother Teresa practiced this in her interactions with people who held a different worldview than hers. I researched Aristotle, as the Father of virtue ethics, as well as modern applications. I used two biographies on Mother Teresa, as well as her book, <i>Lord, Be My Light</i>. I then analyzed books on the LGBTQ population as well as news articles detailing current science and incidents between the church and the LGBTQ community. In my research, I found the evangelical church to be hypocritical and unethical in their interactions with the LGBTQ community according to virtue ethics as explained by Aristotle. I will also contend that personal preference, convictions, science, or religion are irrelevant in determining how the Evangelical Church treats the LGBTQ population.</p>			

POSTER PRESENTATIONS *(continued)*

College of Professions

PHARMACY	POSITION	DEPARTMENT	ABSTRACT TITLE	ABSTRACT AUTHORS
Sharon Grafton	Undergraduate Student	Engineering and Computer Science	Mechanical Evaluation of Metal on Metal Total Hip Arthroplasty	Scott Gardner Sharon Grafton Thomas K. Fehring Timothy L. Norman
	<p>Metal on metal (MoM) total hip arthroplasty describes hip joint replacement where a metal (titanium or cobalt chromium) femoral head articulates against a metal (titanium or cobalt chromium) socket (acetabulum). This implant scenario has generally been successful until more recently when larger (> 36 mm) metal heads have been increasingly used to reduce the incidence of hip joint dislocation. Today, the number of clinical failures (described by fretting corrosion) of MoM total hip arthroplasty is increasing at alarming rates. The objective of our research is to investigate three potential factors that may lead to fretting corrosion. These factors include the horizontal lever arm (HLA), the length of taper engagement, and the trunnion manufacturing tolerances. We hypothesize that a combination of these factors is creating a state of stress and unacceptable motion of the femoral head relative to the trunnion that increases wear and leads to undesirable revision rates. We are testing our hypothesis by conducting finite element analysis (FEA) and hip joint experiments with physiological loading. Initial results show that there is a direct correlation between FEA model and experiments. Furthermore, our initial results show that there is a direct correlation between the head size and the stress on the neck of the implant, in that larger diameter femoral heads create a higher state of stress in the neck of the implant. In addition, initial results validate micromotion of the femoral head with respect to the neck.</p>			
Amber Lee	Undergraduate Student	Engineering and Computer Science	The Immorality of Burying Patents	Amber Lee
	<p>The objective of this poster is to show that burying patents is unethical. To bury a patent is to buy a patent and keep its contents from the public's view or use. The greatest dilemma in burying patents today can be seen in the impact oil companies have on the new energy source solution. The first phase of this project approaches the non-Christian moral views of burying patents from an existential, teleological, and deontological perspective. The main focus of the poster is the view of burying patents from Christian ethics. This project discusses how the First and Ninth Commandments relate to dealing with patents. The project then identifies the Creation Mandate and the obligations it holds in regards to burying patents.</p>			
Jonathan Meade	Undergraduate Student	Engineering and Computer Science	Parallel Plate Flow Chamber Design to Study Endothelial Cell Response	Zach Young Jonathan Meade Timothy L. Norman
	<p>Background: Therapeutic hypothermia is a relatively new supplemental treatment for patients experiencing return of spontaneous circulation after non-traumatic cardiac arrest. Typical treatment uses normothermia, and the purpose of this study was to determine if therapeutic hypothermia is more beneficial. Methods: We searched PubMed, Medline, CINAHL, and ScienceDirect in order to review non-randomized and randomized clinical trials, systematic reviews, and meta-analyses on the risks and benefits of therapeutic hypothermia. We also interviewed an RN and a paramedic to learn the current protocols in-hospital and pre-hospital. Results: Five of the nine articles used concluded that therapeutic hypothermia is significantly beneficial, while the other four determined that more research is needed. From the interviews conducted, we determined that therapeutic hypothermia is not implemented to the extent that research suggests. Conclusion: Although further research is needed, therapeutic hypothermia was found to have either beneficial or neutral effects on the patient, and there is no clinically significant difference in starting the therapy pre-hospital or in-hospital. By continuing research to determine the most effective temperature, cooling method, and duration of treatment, and increasing education of health care professionals, more lives can be saved through the implementation of therapeutic hypothermia.</p>			
Sam Riggelman	Undergraduate Student	Engineering and Computer Science	Ethics and Gun Control: An Engineer's Perspective	Sam Riggelman
	<p>In light of recent mass shootings unsettling American communities from coast to coast, the debate on gun control is again at the forefront of American discourse. Meaningful conversations regarding this multi-faceted dilemma, entrenched in the heart and soul of the American public, hinge on the ability of men and women to engage ethical principles in the ideologies driving this debate. This research explores the issue of gun control in the United States from a variety of ethical perspectives, including a look into the applicability of Scripture and appropriate response of a Christ-centered engineer. The goal of this study is to accentuate the symbiotic relationship between ethics and technology, sifting through the myriad of logical fallacies often dictating the public framework of discussion. Furthermore, it seeks to address the responsibilities and duties of engineers entering the weapon-related industry while establishing principles that might be suited to a broader range of occupations. In totality, this research addresses the complex issues of gun-related fatalities by examining philosophical schools of thought, the biblical worldview, and ethical ramifications of politically and publicly proposed modifications to the American regulatory system.</p>			

POSTER PRESENTATIONS *(continued)*

School of Pharmacy

PHARMACY	POSITION	DEPARTMENT	ABSTRACT TITLE	ABSTRACT AUTHORS
Aleda Chen	Faculty	Pharmacy	Patient Satisfaction with Pharmacist Counseling	Kristina Burban Samuel Franklin Sarah Marks Trevor Reed Brandon Spears Aleda M. H. Chen
<p>Background: Since the implementation of the Omnibus Budget Reconciliation Act in 1990, pharmacies are required to offer counseling to patients. State laws vary with respect to counseling; patients who live in states that set more stringent laws regarding counseling are better informed about their medications. Patients who receive counseling also are more likely to take their medicine properly and consistently, but as many as 25 percent of patients never speak with their pharmacist. Objective: The objectives of this study were to examine whether patients are satisfied with pharmacist counseling, reasons for dissatisfaction, reasons why patients talk to their pharmacists, and desired counseling information. Methods: A survey was created from the literature. After undergoing expert- and peer-review, surveys were administered to patients at one chain and three independent pharmacies. Data were analyzed using descriptive statistics (frequencies) as well as Chi-Square tests to determine differences. Results: A total of 49 patients completed the surveys (67.3 percent female, mean age=49.5±16.5 years). There was a significant difference in perception of pharmacist busyness between chains and independent ($p=0.008$), with more patients at chains viewing pharmacists as too busy to counsel. Patients of chains were more likely to perceive that they were not offered counseling by the pharmacist ($p=0.001$). Patients who were currently receiving medication refills felt that they could trust their pharmacist as much as a physician ($p=0.006$). Patients who received counseling most of the time or all of the time were satisfied with the counseling they received ($p=0.003$) and were able to easily understand the information they received ($p=0.002$). Conclusion: Patients seemed to be satisfied with pharmacist counseling when they received it. Patients of independent pharmacies seemed to find the pharmacist more approachable than chain pharmacies, which could explain why they received counseling more frequently.</p>				
Aleda Chen	Faculty	Pharmacy	Health Literacy, Medication Adherence, and Patient Satisfaction in Community Pharmacy	Sarah Anderson Kelly Madden Lindsay Tarleton Cassandra Wilson-Brownfield Joseph Zerka Aleda M. H. Chen
<p>Background: Health literacy is defined as the ability to read, understand, and act on health information; almost half of adults have inadequate health literacy. Since inadequate health literacy is often followed by many negative outcomes, such as poor medication adherence, it is important to address health literacy, in order to rectify the low levels and improve outcomes. Patients see pharmacists regularly, and therefore, the pharmacist is crucial in improving medication adherence. If health literacy is a barrier to medication adherence, the community pharmacist should be able to provide health literacy-appropriate counseling to improve medication adherence. Objectives: To determine if pharmacists' perception of patient health literacy and actual patient health literacy align, to assess the relationship between health literacy and medication adherence in patients who visit independent community pharmacies, to evaluate patients' satisfaction with their pharmacists' patient counseling, and to determine the pharmacists' willingness to improve their communication technique with their patients according to their health literacy. Methods: Independent pharmacies were selected from the Cedarville network. Patients will complete instruments to assess health literacy (Newest Vital Signs®), medication adherence (8-item Morisky Medication Adherence Scale®), and patient satisfaction with counseling (Likert-type questions derived from the literature). The patient satisfaction items will be peer-reviewed before finalizing the version given to the patients. Patients will consist of those at least 18 years of age, who speak English, and are obtaining a refill for a chronic condition. Results in Progress: Thus far, the selection process of pharmacies is being conducted, as well as securing the health literacy test, the medication adherence test, and formulating questions for patient satisfaction. Completion is anticipated by the end of spring 2014.</p>				
Juanita Draime	Graduate Student	Pharmacy	A Comparison of the Effect of Intermittent and Continuous Infusion of Meropenem on the Prevalence of Nausea in Pediatric Cystic Fibrosis Patients	Marissa Cushing Juanita Draime Bao-Ngoc Ho Jordan Nicholls Bethany Sibbitt Rebecca Widder Dr. Rebecca Gryka Dr. Denise Simpson
<p>Cystic fibrosis (CF), a genetic disease affecting the lungs and GI tract, is the second most common disease leading to shortened life spans in children (1). As a result of disease pathology, patients experience frequent lung infections along with nausea, loss of appetite, and poor absorption of nutrients (2,3). Current treatment for these infections involves continuous or intermittent IV meropenem therapy (4,6). One frequent side effect of meropenem in cystic fibrosis patients is nausea, vomiting, and diarrhea, leading to further weight loss in these patients (7). It is hypothesized that increased serum concentrations of meropenem lead to increased incidences of the GI side effects, and that continuous IV administration of meropenem will reduce nausea when compared to intermittent administration. This collaborative project with Dayton Children's Hospital, to be completed in the spring of 2015, proposes to improve the quality of life and care for pediatric CF patients by assessing reported nausea and its relationship to serum concentration of meropenem as well as testing established clinical protocols for meropenem administration in pediatric CF patients admitted to Dayton Children's. A crossover design will be used, with patients randomly divided into two treatment groups. One group will receive four days of a 120 mg/kg/day continuous IV dose of meropenem followed by an intermittent 40 mg/kg/dose infused over 30 minutes every eight hours for another four days. The other group will receive the intermittent dose followed by the continuous infusion. Serum concentrations will be quantified utilizing a High Pressure Liquid Chromatography instrument and incidence of nausea will be measured through the average doses of kytril, an antiemetic, ordered for each patient in addition to the number of episodes of emesis. This study will be carried out with around 10 participants in order to provide a framework for further multi-site studies of the same nature.</p>				

POSTER PRESENTATIONS *(continued)*

School of Pharmacy *(continued)*

PHARMACY	POSITION	DEPARTMENT	ABSTRACT TITLE	ABSTRACT AUTHORS
Tracy Frame	Faculty	Pharmacy	Survey of Patients' Perceptions of Community Pharmacists Giving Vaccinations	Morgan Bailey Matt Madden Darlington Njoku Vineeta Rao Joshua Sittler Tracy R Frame
				<p>OBJECTIVES: To (1) determine if patients receive vaccinations from their pharmacists, (2) determine common fears and misconceptions patients have of going to pharmacists for vaccinations. (3) examine possible correlations with demographics. METHODS: Random sample of patients in Cedarville and Springfield, OH voluntarily participated in an anonymous survey. Demographics such as ethnicity, age, income, and perceptions and reasons of whether or not they received vaccinations from a pharmacist were collected. Verbal consent was obtained. Analyses were performed using IBM SPSS. RESULTS: There were 89 participants from two different locations. Results indicated that 30.3 percent patients do not get vaccinations. When asked by whom they receive their vaccinations; 68.5 percent were from family doctors, 11.2 percent from nurses, 13.5 percent from pharmacists, and 6.2 percent did not answer. When asked the reasons patients do not receive vaccinations from a pharmacist; 41.6 percent of patients reported they prefer another healthcare provider to administer their vaccines, 23.6 percent they did not know that pharmacists can give vaccines, 15.7 percent do receive their vaccinations from a pharmacist, 11.2 percent had other reasons not to get vaccinated by a pharmacist, and 1.1 percent do not trust pharmacists to give them their vaccines. IMPLICATIONS/CONCLUSIONS: According to the results shown, there were a high percentage of patients who preferred to go to their family doctor to receive their vaccinations instead of going to a nurse or pharmacist. Examining why patients do not receive their vaccines from a pharmacist, many of the patients did not know that pharmacists could administer vaccinations. It would be beneficial to further educate patients on pharmacist capabilities and accessibility in order to positively influence more patients to choose the option of getting vaccinated by their local pharmacist.</p>
Tracy Frame	Faculty	Pharmacy	Use of Myers-Briggs Personality Types in the Distribution of Students to Team-Based Learning Groups	Tracy Frame Rebecca Gryka Aleda M. H. Chen Mary E. Kiersma Lorin Sheppard Stephanie Cailor
				<p>Objectives: To examine students' perceptions of team-based learning (TBL) and the level of confidence associated with the learning format when distributed into teams consisting of diverse personality types and gender. Methods: Team-based learning (TBL) is an active learning tool where students are organized into teams for a specified term but little data exists regarding the best method of distributing students into teams. TBL was utilized in two pharmacy courses. Prior to the start of the 2012 academic year, students completed the Myers-Briggs Type Indicator® (MBTI®) personality test. Students were separated into nine teams of diverse MBTI® types and gender. Pre- and post-tests, administered at the beginning and end of the semester, were utilized to assess the students' perceptions of TBL and the level of confidence associated with the learning format. Descriptive statistics and paired t-tests were performed in SPSS. Results: A total of 53 students were distributed into teams; 26 students (50 percent) were extroverts and a total of 21 students (40 percent) were identified as Sensing-Thinking-Judging MBTI® type. Students felt teams should consist of differing personalities ($p < 0.001$) and 83 percent of students agreed-to-strongly agreed their team had diverse personality types. At the end of the semester, significantly more students believed team meetings can produce excellent outcomes ($p = 0.009$). Additionally, over 80 percent of students agreed-to strongly agreed, it was easier to connect on a personal and intellectual level with their teammates. Nearly all (98 percent) students somewhat-to-strongly agreed it would be beneficial for their future career. Conclusions: Students agreed teams should consist of differing personality types. Students learned how to connect with others as the semester progressed and viewed this as a benefit to their future career, which is essential in the health care field today due to the emphasis on having a collaborative focus.</p>
Lauren Haines	Undergraduate Student	Pharmacy	Community Pharmacist Consultation: How Satisfied Is The Patient?	Lauren Haines Kellee Sterling Abigail Moon Garrison Reeves Paul Bicknell
				<p>Studies concerning patients' satisfaction with community pharmacy drug information, which is usually provided at drug dispensing show patients' satisfaction, dissatisfaction, and desires to improve the communication about drugs. Researchers want to find ways pharmacists can enhance the overall drug information services, which would improve patient's knowledge and increase medication safety. The goal of this research was to survey patients in a community pharmacy setting to see what areas of drug information was satisfactory and which areas could be improved. The research process involved passing out surveys to two different community pharmacies: Town Drugs and Madison Avenue Pharmacy. The survey consisted of a series of questions related to patients' satisfaction with pharmacists' consultation about medication uses. Pharmacy students distributed and received in return from both community pharmacies sixty surveys from patients over the age of 40. Overall, the results of the surveys showed the majority of patients were highly satisfied with pharmacist consultation in their community pharmacies. This outcome allowed community pharmacists to see how well they communicated with their patients. This outcome could also encourage pharmacists to place even more importance on the patient-pharmacist interaction, which seems to be directly related to the patient's overall satisfaction. After analyzing the results, researchers found some patients didn't know their community pharmacy offered medication counseling, which shows pharmacists and pharmacy technicians should find ways to increase awareness of medication counseling and other services provided. Patients that did receive drug information from their pharmacists felt it was sufficient and of value. Overall, this study shows that drug information, either provided written or verbally, can enhance patient satisfaction, education, and overall confidence in their medication regimen.</p>

POSTER PRESENTATIONS *(continued)*

School of Pharmacy *(continued)*

PHARMACY	POSITION	DEPARTMENT	ABSTRACT TITLE	ABSTRACT AUTHORS
Allison Henry	Graduate Student	Pharmacy	Effects of Physical Stress and Maturational Changes on Hypothalamic Pituitary Adrenal Axis Function Through Cortisol Analysis	Amy Granger Allison Henry Lauren Lillienkrantz Amanda Smith Paul Smis William John Van Schepen
<p>Cortisol is a versatile hormone that possesses both catabolic and anabolic functions in the body, such as increasing the blood glucose levels through gluconeogenesis and metabolizing carbohydrates, proteins, and fats. Cortisol levels are controlled by communication of the hypothalamic-pituitary-adrenal axis (HPA axis). Plasma concentration of cortisol adheres to a diurnal rhythm, meaning that cortisol levels are highest in the morning and taper off throughout the day. Free cortisol levels in the body are most commonly measured by salivary assays. External factors, such as stress, initiate the process that produces cortisol in the body. Stressors can be physical, psychosocial, or physiological/pathological in nature. Physical stressors, such as exercise, are the factors that will be evaluated in this study. Currently, there is a shortage of studies investigating the impact of stress on HPA axis response and cortisol levels. The insight gained from this study will lend greater understanding to the HPA axis function in response to stress and maturation. As greater understanding is achieved, this will lead to personalized medication profiles and therapeutic dosing regimens for patients with cortisol regulation disorders.</p>				
Lia Hickenbotham	Undergraduate Student	Pharmacy	Adherence to Type 2 Diabetes Treatment	Micah Bernard Jessica Ward Nicholas Rudy Casey Nelson Lia Hickenbotham
<p>BACKGROUND: Non-adherence to diabetes treatments can result in serious health problems such as nerve damage, blindness, and skin ulcerations. Previous studies suggest that non-adherence rate is between 25-30 percent depending on the treatment. Studies have not evaluated the impact that pharmacists have in improving adherence to diabetes management. This study aimed to assess patient compliance with and obstacles to medication administration, as well as determine possible steps pharmacists can take to increase rates. METHODS: An electronic survey was created to assess the adherence tendencies of respondents with Type 2 Diabetes. The survey was sent by email to the faculty, staff, and students of Cedarville University and 28 responses were received. RESULTS: This study showed that 75 percent of respondents did not completely adhere to their treatment program. The main reasons for noncompliance were forgetfulness, busyness, and cost of medication. CONCLUSION: Most respondents reported that they had not been counseled by their pharmacist on how to properly take their medication. Based on the results, pharmacists should place greater importance on counseling.</p>				
Kelly Hiteshew	Faculty	Pharmacy	Impact of a Pharmacist-Managed Smoking Cessation Program	Alexandra Archambault Belinda Darkwah Kale Hanavan Ellery Kent Myriam Shaw Ojeda Larisa Yuchimiuk Kelly J. Hiteshew
<p>People have smoked cigarettes for a very long time, which leads to addiction, many types of cancer, and cardiovascular disease. These negative side effects cause many smokers to attempt to quit. Smoking cessation programs are helpful because patients can talk through the factors that caused them to start smoking in the first place, which includes stress due to their past, home situations, etc. The success rate of patients who enroll themselves varies per program. The goal of this study was to evaluate the success of a pharmacist-managed smoking cessation program at a federally qualified health center. Data was collected via phone-call surveys. If the participant did not complete the telephone survey, their smoking status upon discontinuation of the smoking cessation program was obtained through the electronic health record. Nineteen patients completed the survey, and 17 of them reported that the program was helpful in some way. Surveyed patients identified three areas of the program that they found helpful in their quit attempt: learning, counseling, and medication. 20.7 percent of the 58 participants of the program successfully quit smoking. In conclusion, the program did help some patients quit smoking or progress towards a tobacco-free life. Although no smoking cessation program has a 100 percent success rate, they are important because they do help the people who are willing to put in the time and effort to utilize the program and stop their addiction.</p>				

POSTER PRESENTATIONS *(continued)*

School of Pharmacy *(continued)*

PHARMACY	POSITION	DEPARTMENT	ABSTRACT TITLE	ABSTRACT AUTHORS
Jeffrey Huston	Faculty	Pharmacy	What Are Pharmacist's Thoughts on Social Media Being the Next Counseling Stage?	Emily Bruce Kathrine Distel Julie Neal Matthew Rivera Caleb VanDyke Jeff Huston
	<p>11,983 registered Ohio pharmacists were surveyed on their thoughts towards social media as the next counseling stage. The survey consisted of multiple choice and a short answer question that adequately measured the pharmacists' thoughts on social media. 640 pharmacists replied to give a basic consensus of the attitude toward social media as a counseling stage. Most of the pharmacists that were surveyed stated that they use at least one form of social media and most of them said they would not feel comfortable counseling a patient via social media. Their biggest concern was the privacy issue, but they also worried that the information that the pharmacist gives the patient could be misunderstood or misinterpreted. It is much easier to read facial expressions and be able to tell whether or not someone is understanding what you are saying versus trying to decipher their understanding through text. The majority of the surveys said they felt that only the younger age groups would benefit from the social media counseling because most elderly people do not use social media outlets at all. Surprisingly, most of the pharmacists that were surveyed felt like customers would not feel more comfortable with getting counseling online. The prediction was that the patients would be embarrassed to ask certain questions in a face to face conversation. Overall, this survey seemed to shed some light on different issues that could be involved with counseling via social media. This could be the next way of counseling but not without fixing some of the issues that were mentioned above.</p>			
Amy Roy	Graduate Student	Pharmacy	Factors Influencing Emergency Contraception Use in Indigent Populations	Ashley Benjamin Kasandra Chambers Melissa McNicol Amy Roy Kurtis Schultz April Yoakam Miriam A. Ansong Tracy R. Frame
	<p>Introduction: The indigent population in America is defined as persons who do not have the financial means to support themselves and are below the federal/state poverty line. Indigent women are disproportionately affected by unwanted, unplanned pregnancies. In Medicaid-eligible populations, many women have reported inconsistency in taking their normal birth control medication after having their first child which may result in another unwanted pregnancy. This has led to a drive for contraceptive education to be integrated in as many places as possible. Studies have previously shown that the lack of knowledge (i.e, how Emergency Contraceptives (ECs) work or where to obtain them) is a major factor deterring women from using them; therefore, this study will address several additional factors that may influence the lack of levonorgestrel use in indigent women. Objectives: To determine the impact of morals and religion, patient education, and cost on EC use in the indigent population. Methods: The study is as a cross-sectional observational study that will allow us to conduct exploratory research and investigate relationships among our variables (indigent population and their use of ECs). A cross-sectional study design was chosen in order to observe a stratified group of subjects at one point in time and draw conclusions about the population based on comparisons made among the strata. To be included in the study, participants will be: at least 18 years old, female, and fall below the federal poverty level, which varies according to the number of individuals in a given household. The inclusion and exclusion criteria are based upon the psychometric testing of the instruments utilized in this study. Qualified patients will be given informed consent to sign prior to answering the survey questions. Participants will then be asked to respond to 20 questions focusing on demographics, education and religious views. The information obtained will be confidential. Results: Data collection will begin from May 2013 to May 2014 once IRB approval is obtained. Analyses of data will be done using SPSS. Results will be presented in 2015.</p>			
Katie Woodard	Undergraduate Student	Pharmacy	Future Applications of Social Media in Pharmacy	Katie Woodard Joshua Pearson Jessica Davis Jeremy Rall Jacob Schaffer
	<p>Social media has a major influence on society today; the popular site Facebook® has over 1 billion users, therefore healthcare professionals must begin to look at the potential use of social media as a tool. A survey was conducted of Cedarville's first professional pharmacy class and found that 94 percent of students have personal Facebook accounts and 84 percent have Twitter accounts. Eighty-four percent of students said they believe that social media could be used in a professional manner. Fifty-nine percent of the students believe social media can be used as a marketing tool for pharmacists, and the same percentage say social media can be used for inter-professional communication. Students also maintain that social media could be used as a tool for pharmacists if the pharmacists keep their personal accounts separate from the accounts they use to communicate with patients. On a scale of one to 10, with 10 being the highest, the average student says the risk of using social media in pharmacy is a 7.84. Eighty-eight percent of students say that they would not give medical advice to a patient via social media. In the original survey, 67 percent of students answered that if a pharmacist sees a patient post/tweet about drug misuse/abuse, they are obligated to take action against the patient or confront them, however, after the presentation, only 47 percent answered the same way. In order for social media to be used by pharmacists, they must be educated about the risks and liabilities; students changed their responses to certain questions (particularly regarding liability) after becoming more informed. With proper education, social media can be used in the future by pharmacists for patient education, professional networking, and marketing.</p>			

PERFORMANCES

College of Arts and Sciences

PHARMACY	POSITION	DEPARTMENT	ABSTRACT TITLE	ABSTRACT AUTHORS
Rebekah Andrews	Undergraduate Student	Music and Worship	The Piano Teacher	Rebekah Andrews
<p>The 19th-century was full of changes. These changes affected every aspect of life and transformed societies, economies, and governments. The romantic era saw a dramatic shift in the view of composers and musicians. The public was slowly becoming more educated in the art of music and the role it could have in their everyday lives. Composers started to compose music just for the sake of composing and using their position as a composer to wield influence over others and how the view of themselves. Composers also started writing works specifically for the piano to be played as solo literature. Changes to the piano brought about new challenges to the instrument and the way the piano was played. These challenges brought about by these composers and performers created an interesting phenomenon among the public. Because people were anxious to learn the piano and play these beautiful works by these artists, they needed someone to be able to teach them the technical aspects of the keyboard. In previous history, the piano or keyboard was learned in junction with other instruments and was only mastered by true pedagogues or composers. Now in the nineteenth century, the general public wanted to learn this stunning instrument and these composers were turning into teachers in order for their works to be performed well. These traits and changes are seen in the music of Johannes Brahms. Brahms was born in 1833 and died in 1897. His life was right in the middle of these changes and happenings of the 19th-century. His piano music represents many of the challenges faced during this time and even today teachers are needed to explain these techniques to their students to fully enjoy this music.</p>				
Emalyn Bullis	Undergraduate Student	Music and Worship	To Greet You, My Lady (My Enemy)	Emalyn Bullis Kailley Grapes
<p>With the arrival of comedy on the opera stage, a large change in characterizations and plot began to take place. Instead of large grandiose performances of the fantastic, composers strove to write for the "everyman" and have them be perceived in the spotlight. Mozart championed opera buffa by writing several operas that depicted ordinary characters as the heroes and the aristocracy as the "idiots" that they deceived and fooled throughout the production. In "The Marriage of Figaro" we find that Susanna and Figaro, both ordinary citizens who work for the Count, are in a battle of wits with their employer, trying their best to outsmart him to have their own happy ending. Mozart uses irony, wit, double entendre, and sarcasm to make the characters and comedy come alive in a unique and hilarious way. In Act I there is a stunning example of this as Susanna and Marcelina, an older woman with conquests on Figaro, sing a duet that explores the comedy of ordinary sarcasm as well as the triumph of the commonplace over the aristocracy. This may be common enough today, but opera buffa when it first appeared on the stages of the late 18th century was new, exciting, and increasingly popular with audiences. Through the exploration of the duet "Via Resti Servita," or, "To Greet You, My Lady," from Mozart's, "The Marriage of Figaro," audiences will again be able to experience the hilarity and revolutionary aspects of opera buffa.</p>				
Rachel Lowrance	Undergraduate Student	Music and Worship	Transplanting the Harpsichord: The Keyboard's Rise to Prominence in Bach's Concerto, BWV 1061	Rachel Lowrance Anne Morris
<p>J. S. Bach was the first prominent composer to write and arrange concertos for multiple solo harpsichords. Many of his harpsichord concertos were transcribed from concertos originally composed for other solo instruments. His Concerto for Two Keyboards in C Major, BWV 1061, is the only concerto believed to be specifically written for two harpsichords. This shows the higher level of prominence given to harpsichords toward the end of the Baroque era as they were transplanted from the supporting basso continuo and into the foreground. This piece was not only written for double harpsichord with orchestral accompaniment, a unique solo instrument combination for the Baroque era, but it may have been originally written for unaccompanied harpsichord. Only the two harpsichord parts survive in Bach's handwriting. The orchestral parts were pieced together from other copies by his family members. They do not present new material and simply provide emphasis on cadences through doubling the keyboard parts. Also, the second movement is unusually scored for only two harpsichords. Even though this piece may have been originally composed for solo harpsichords, since Bach was at the Collegium Musicum at the time, he had the orchestral performing forces at his disposal. The piece debuted with chamber orchestra at the Collegium Musicum in Leipzig in 1735. This piece demonstrates a new prominence given to an instrument that, in the Baroque era, was usually used for the supporting basso continuo. We will be performing the Concerto for Two Keyboards in C Major, BWV 1061, on two pianos and presenting using historical documentary research.</p>				
John Mortensen	Faculty	Music and Worship	Silent Films	John Mortensen
<p>In the Genesis narrative humanity is given the task of naming, subduing, and cultivating the earth. This task is troublesome toil on the one hand and ennobling limitation of the Creator on the other. In our age we have figured out how to give over to computers many labor-intensive jobs. This process of abdication is nearly always presented as progress, with little reflection on what may be lost. In the Silent Films project, we deliberately reclaim the task of creating music with our own hands, in real time, as films are shown. Instead of recording music in advance, or even creating it on computers, we put upon ourselves the inconvenience of managing the physical and mental complexities of music in the semi-dark with a noisy audience and no assurance of success. Our purpose is to discover what happens. We propose that unreflective abdication to technology of "human" tasks may in fact diminish the human experience. Movie music is now "assumed" to belong on a recorded track. As we reclaim the task of playing that music with our own hands, in real time, we endeavor to shed light on the losses we have experienced when we handed this job over to machines.</p>				
DeLora Neuschwander	Undergraduate Student	Music and Worship	Russian-Jewish Art Music: The Voice of a People	DeLora Neuschwander
<p>Every culture has a distinct way of communicating their core values, beliefs and history, and for many cultures, music plays a vital role in this communication. The Jewish people have a rich heritage marked by very distinct traditions, values and beliefs which are communicated in what has come to be known as "Jewish Art Music." This is music composed in the Western-Russian classical idiom which utilizes distinctly Jewish elements. A deeper understanding of this music will give outsiders a better understanding into the culture and heritage of the Jewish people. This paper explores the characteristics of Jewish music, particularly that music composed in the Eastern European tradition. Much of the traditional music of the Jewish people has had a religious context and is a reflection of their collective culture and its interaction with the cultures of the nations into which they have emigrated. This paper looks specifically at the founding and development of the Society for Jewish Folk Music, which was an organization founded in Russia in 1908. It examines the interplay between the creation of a distinctly "Jewish" style and how that has interacted with the Russian classical tradition. This paper looks specifically at the founding and development of the Society for Jewish Folk Music. While the society itself had a short life, it had wide-spread effects, moving to Moscow, Poland, Austria, Palestine, and the United States. This style of music is largely representative of a rise in Jewish nationalism which began to grow in Russia near the end of the 1800s. Musical nationalism played a large role in this Jewish cultural renewal. In this paper I examine the interplay between the creation of a distinctly "Jewish" style of music and the idea of Jewish musical nationalism.</p>				



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