

## **Athletic Training**

**Author's Name:** Alissa Foote

**Research Advisor:** Dr. James Hand

**Title:** May Thurner Syndrome: A Case Report

**ABSTRACT:** A female athlete presented with generalized swelling in the left lower extremity without causation. May Thurner Syndrome (MTS) was diagnosed through a Magnetic Resonance Venography. The etiology of MTS includes the compression of the left common iliac vein by the overlying right iliac artery, resulting in impeded venous blood flow from the left lower extremity. MTS commonly occurs either during pregnancy (compression of vein) or in women in the second to fourth decade of life. Our patient was a non-pregnant 19-year-old athlete, making this an unusual case. Treatment included a balloon angioplasty followed by stent placement in the left common iliac vein and surgical bypass reconstruction. There has been a decrease in edema of the left leg since the procedure/surgery. The athlete has returned to athletic participation.

**Author's Name:** Rebecca Shomo

**Research Advisor:** Dr. James Hand

**Title:** Do Athletes Feel Confident and Secure When Wearing a Functional Knee Brace When Performing in Their Primary Sport?

**ABSTRACT:** After incurring an anterior cruciate ligament (ACL) injury, an athlete may choose to return to his or her desired sport. Typically, athletes will miss 6-9 months of competitive play as a result of this injury, including reconstructive surgery and rehabilitation. While most physicians prescribe functional knee braces (FKB) after ACL surgery, physicians are starting to change their brace prescription practices, including advising the athlete not use a brace at all. We looked at 15 athletes who had ACL reconstructive surgery (10 braced and 5 non-braced) to figure out how confident and secure they were when performing with, or without, a functional knee brace.

**Author's Name:** Lindsay Smith

**Research Advisor:** Dr. James Hand

**Title:** The link between Alzheimer's disease and Head Injuries

**ABSTRACT:** This study investigated the claims of current research that evidence exists of a correlation between head injuries and Alzheimer's disease. When a person sustains a head injury, it affects the function of the brain. Several factors should be considered when analyzing the relationship between the two, such as: what level did the head injury affect the brain, did it lead to a chain of events causing plaques, and did it occur during the presymptomatic phase of the disease? Additional factors that should be taken into consideration are the severity of the head injuries and their history of head injuries. This correlation is prevalent in today's society due to the increase in head injuries and people developing Alzheimer's disease. It would be beneficial to educate people on the long-term damage of head injuries and exemplify the importance of seeking medical attention when suffering from a head injury. The data were collected on the causation of Alzheimer's disease. The data supported the theory that there is a correlation between head injuries and Alzheimer's disease. Clinical studies and original research indicates that traumatic brain injuries can trigger the release of BAPP and the development of amyloid plaques, which could lead to the development of Alzheimer's disease.

**Author's Name:** Lauren Teodorovici

**Research Advisor:** Dr. James Hand

**Title:** Rotator Cuff Injuries and the Pitching Mechanism: Is there a Correlation?

**ABSTRACT:** The pitching mechanism is a highly complex interaction of dynamic force distributed among the shoulder, primarily the rotator cuff musculature. Research suggests that rotator cuff muscles are often injured from prolonged overhead throwing and/or improper throwing mechanics. We reviewed current research studies investigating rotator cuff injury causes or links to the throwing motion and rotator

cuff injury. The research indicated and supported the theory that poor pitching mechanics (as well as prolonged pitching utilizing proper mechanics) may add to the stress placed on the rotator cuff over time and it may be responsible for rotator cuff pathologies. Proper throwing mechanics and limitations should be followed to prevent injury and possibly extend an athlete's career.

## **Biology**

**Author's Name:** Savanna Athey

**Coauthors:** Adrienne Barnhardt, Meredith Brown, Jonathan Cooley, Jackie Davis, Jeremy DeWolf, Lori Fraley, Ashley Freeze, Jacob Hill, Maggie Keeble, Hannah Kovach, Justin Smith, Carley Tatum, Renee Welfare, Amanda Williams

**Research Advisor:** Dr. Steve Coggin

**Title:** Photomicrography - Cell Biology Spring 2012

**ABSTRACT:** Microscopy is one of the key techniques used to study cells. Students in Cell Biology (BIOL 3590) made these images in the spring semester of 2012 to partially fulfill assignments in several labs. The students used a Zeiss Axioimager compound light microscope and a Zeiss Discovery Stereomicroscope. Each microscope was equipped with a digital camera and image processing software. The students used brightfield, darkfield, differential interference contrast and fluorescent optics to produce their images. Specimens ranged from bacteria (*Oscillatoria*) to plants (clover, dandelion, elodea, and river birch) to protists (diatoms and green algae) to animals (cnidarians, starfish, birds, spiders, cows and humans). These photomicrographs demonstrate the College's technological sophistication, our students' skill and our students' creativity.

**Author's Name:** Jessica Bound

**Coauthors:** Dr. Constance Rogers-Lowery

**Research Advisor:** Dr. Constance Rogers-Lowery

**Title:** Changes in Composition of Coral Larvae Exposed to Different Levels of Carbon Dioxide

**ABSTRACT:** As the levels of atmospheric CO<sub>2</sub> increase, the pH of the oceans will become more acidic, potentially affecting the physiology of marine organisms, such as coral. While much research has been dedicated to the impact of CO<sub>2</sub> levels on calcification, skeletogenesis, and other physiological mechanisms of adult coral, little has dealt with early developmental stages. In the current study, planula larvae of the coral *Favia fragum* were exposed to different levels of atmospheric CO<sub>2</sub> (ambient = 390ppm, 700ppm, and 1300ppm) for 10 days. At that point, larvae were assayed for the amounts of total lipids, total carbohydrates, and proteins. As the larvae aged, the amount of lipids decreased; however, there was a greater decrease at elevated CO<sub>2</sub> levels. After 10 days, protein levels did not decrease in normal CO<sub>2</sub> treatment, but there was a significant decrease at 700ppm and 1300ppm. Total carbohydrates increased as the larvae aged, with 1300ppm CO<sub>2</sub> having the highest content of carbohydrates. This data may indicate that larvae exposed to higher levels of CO<sub>2</sub> utilize energy stores (lipids) to produce higher levels of carbohydrates to deal with the lower pH of their seawater.

**Author's Name:** Sarah Moore

**Research Advisor:** Dr. Michael J Baranski

**Title:** Analyses of the Spread of the Invasive Bradford Pear (*Pyrus calleryana* Decene.) in the Catawba College Ecological Preserve

**ABSTRACT:** Invasive species are detrimental to the native flora and fauna. Knowledge of how and where an invasive species will spread is an important tool in the eradication of an invasive species. During the early 1900s the Bradford Pear (*Pyrus calleryana* Decene.) was brought to America from China as a possible weapon to combat fire blight in the common pear. Horticulturalists noted the tree's attractive uniform shape and impressive floral display and within a few years the tree had become one of

the most popular landscaping trees in America. Only one variety of *P. calleryana* was initially being used in the horticulture industry, a cultivar that was gametophytically self-incompatible and therefore could not produce offspring. Later, different cultivars were introduced by the horticulture industry, and cross-fertility was now possible between the cultivars; fruit began to set on the Bradford Pear tree and thus, an invasive species was born. A review of the literature has shown a gap in the knowledge of how this invasive species spreads once introduced into new habitats. The spread of escaped Bradford Pears was studied in the Catawba College Ecological Preserve. The trees were mapped and aged using GIS technology and the data were analyzed using the Holgate method. *P. calleryana* will invade an area at random eventually resulting in uniform dispersion due to both interspecific and intraspecific competition. Using this knowledge, the spread of the invasive Bradford Pear can be combated by locating and eradicating the reproductive cultivars and the colonizing individuals.

**Author's Name:** Jeremy Proctor & Renee Welfare

**Research Advisor:** Dr. Jay Bolin

**Title:** The germination ecology of the federally endangered Michauxii sumac (*Rhus michauxii*, Anacardiaceae) including endozoochory

**ABSTRACT:** Germination of *Rhus michauxii* seeds is prevented by endocarp impermeability; previous work found that dry heat, as an analogue for wildfire, is a poor candidate to break *R. michauxii* seed dormancy. We hypothesized that endozoochory, seed passage through the digestive tracts of animals, may play an important role in the scarification of *R. michauxii*. Here we present experimental data on the effect of endozoochory by Northern Bobwhite Quail (*Colinus virginianus*) on the germination of *R. michauxii*, *Rhus copallinum*, and *Rhus glabra*, three species that frequently co-occur at with *R. michauxii* localities. After passing through the digestive tracks of Northern Bobwhite Quail, we found significantly higher rates of germination in *R. copallinum* and *R. michauxii* relative to control seeds. Germination rates were low and inconclusive for *R. glabra*.

**Author's Name:** Amanda G. Williams

**Coauthors:** Dr. Constance Rogers-Lowery

**Research Advisor:** Dr. Constance Rogers-Lowery

**Title:** Metabolic Response to Ocean Acidification in the Colonial Cnidarian *Hydractinia symbiolongicarpus*

**ABSTRACT:** Anthropogenic carbon dioxide emissions have increased at an astounding rate since the dawn of the industrial era. Due to their incredible buffering capacity, the earth's oceans have absorbed approximately 30% of all anthropogenic CO<sub>2</sub>, resulting in a global decrease in seawater pH. This process, known as ocean acidification, has been shown to have profound effects on marine calcifiers, potentially due to the decreased availability of carbonate and bicarbonate needed for various calcification mechanisms. While many studies have confirmed a decrease in calcification rate in select calcifying species, particularly tropical corals, little is known about how acidification will affect metabolic rate. Likewise, the effects of acidification on calcifiers inhabiting estuaries have not been well studied. Estuaries are unique environments that play a crucial role in the growth and development of young marine organisms, making it critical to understand the ecological and organismal implications of acidification in these areas. Because they seem to be among the most sensitive to pH shifts and changes in dissolved carbon concentrations, some estuarine calcifiers may effectively serve as sentinel species. This study examines metabolic rate in the calcifying colonial cnidarian *Hydractinia symbiolongicarpus* in response to exposure to environments with heightened concentrations of dissolved CO<sub>2</sub>. The results indicate that heightened dissolved carbon dioxide concentrations do not significantly affect metabolic rate. However, a significant increase in metabolic rate was observed with a controlled increase in temperature.

## **Chemistry**

**Author's Name:** Alan Burgess and Lori Fraley

**Research Advisor:** Dr. Mark Sabo

**Title:** Separation and Quantification of 5 Sunscreen Components Using HPLC Analysis

**ABSTRACT:** While ultraviolet radiation makes up less than 10% of solar radiation, it is still important to protect the skin from the harmful effects of long term exposure. If left unprotected, ultraviolet radiation can cause harm ranging from speeding the aging process of the skin to causing skin cancer. There are many different chemical compounds used as sunscreens. Inorganic sunscreens act to reflect ultraviolet radiation while organic sunscreens act to absorb it. This study attempts to develop an efficient method of analysis of 5 organic compounds used as sunscreens in lip balm: avobenzone, oxybenzone, octinoxate, octisalate, and octocrylene. Standards and samples were prepared then analyzed using high performance liquid chromatography (HPLC) and a UV/Vis detector. A UV/Vis spectrophotometer was used to determine the wavelength of maximum absorbance of each single component. The detection wavelength on the HPLC was varied with time to determine the ideal detector wavelength for each component. After developing the separation method, it was effectively used to evaluate the concentration of sunscreen components in lip balm.

**Author's Name:** Rachel Cone

**Research Advisor:** Dr. Constance Rogers-Lowery, Dr. Mark Sabo

**Title:** Temperature and Carbon Dioxide Effects on Carbonic Anhydrase in *Aiptasia* spp.

**ABSTRACT:** Increased levels of atmospheric CO<sub>2</sub> associated with global climate change is causing the pH of seawater to become more acidic. This may have a negative effect on organisms, especially those that produce skeletons containing carbonate produced from bicarbonate. Carbonic anhydrase catalyzes the reaction of carbon dioxide to bicarbonate. While *Aiptasia* spp. (sea anemones) do not produce a skeleton, they serve as a theoretical model for studying the effects of ocean acidification on physiology of evolutionarily related coral because of carbonic anhydrase's role in acid/base regulation. The objective of this research was to determine the effects of elevated CO<sub>2</sub> and different temperatures on carbonic anhydrase in *Aiptasia* spp. Biologically, sea anemones thrive in moderate water temperatures (20-23° C) which served as our control temperature. Sea anemones were treated with CO<sub>2</sub> concentrations of 392 ppm (control), 700 ppm and 1300 ppm. Their homogenized tissue was analyzed with a colorimetric method on a UV/Vis spectrophotometer. Samples were held at temperatures of 10, 20, and 30° C while rates of enzymatic activity were recorded. Carbonic anhydrase activity levels were determined in units of activity per gram of protein. Protein concentrations were determined using the Bradford assay. There was a significant increase in activity level of carbonic anhydrase with an increase in temperature. There were significantly lower differences observed for carbonic anhydrase activity at 700 ppm CO<sub>2</sub> when compared to other levels.

**Author's Name:** Jacob Hill

**Coauthors:** Josh Hanna

**Research Advisor:** James W. Rawlins

**Title:** Understanding Rates of Corrosion, Diffusion of Corrosive Species, and Failure of Steel through Fluorescent Polymers in Thin Films

**ABSTRACT:** This project examined the rate of diffusion of hydroxyl ions through a three-layer thin film and the rate of corrosion of a steel (QD-36) plate when covered with the same three-layer thin film containing increasing amounts of dimethylformamide (DMF). A pH responsive probe, fluorescein isothiocyanate (FITC), tethered to a standard phenoxy resin (PKHH) was employed for the study. It was found that FITC could be effectively bound to the PKHH polymer at 1% by weight as a tethered probe. A direct correlation was noted between the amount of DMF present in solution and the rates of corrosion

and hydroxyl ion diffusion. Ion dissociation and transport through the PKHH polymer was accelerated by DMF. Onset of corrosion was noted in < 10 hours when exposed to 1M sodium chloride solutions, however, ion saturation of the thin film occurred much later than corrosion initiation. In 100% water, hydroxyl ion diffusion could not be detected in any layer of the FITC bound PKHH polymer due to the polymer hydrophobicity.

**Author's Name:** Blake Rushing  
**Research Advisor:** Dr. Carol A. Miderski  
**Title:** Effects of Oxide Layer Thickness on Wavelengths Reflected from Anodized Niobium Using AFM

**ABSTRACT:** The anodizing process of niobium forms an oxide layer on top of the metal surface and produces different colors based on the voltage used. It is hypothesized that higher voltage levels lead to thicker oxide coatings which then allow light to constructively interfere at differing wavelengths to produce an array of colors. The purpose of this study is to determine if the most intense wavelength produced is dependent on the thickness of the oxide coating, which suggests the presence of constructive interference. This study aimed to test this correlation using Atomic Force Microscopy (AFM). Niobium oxide samples were made by sending various voltage levels through a voltaic cell containing 10% trisodium phosphate solution with the niobium as the anode and a stainless steel strip as the cathode. Afterwards, an AFM was used to measure the border between the colored sections and the bare metal, giving the thickness of the oxide layer. A fiber optic probe was then used to measure the most intense wavelengths that were emitted from each sample. Results showed a linear correlation between voltage and oxide thickness, as well as between oxide thickness and observed wavelengths, showing a clear relationship between these variables.

## Honors

**Author's Name:** Julie Gilley  
**Research Advisor:** Dr. Gary Freeze  
**Title:** Would the Cream Still Rise? An Evaluation of Upward Bound

**ABSTRACT:** "We have moved from a society in the 1950s and 1960s, in which race was more consequential than family income, to one today in which family income appears more determinative of educational success than race."

~Sean F. Reardon, Stanford University (quoted in *New York Times* February 9, 2012)

Since the optimistic days of Lyndon B. Johnson's Great Society, the federal government has attempted to place more emphasis upon the universal importance of education to achieve economic equality. What some historians have called "the liberal consensus" of the mid-twentieth century held that giving low-income students the right federally funded educational resources would help lift them from the cycle of poverty. Landmarks of this approach have been the TRiO programs passed initially in 1964. TRiO is not an acronym "but refers to the number three, the original number of US federal programs designed to assist economically disadvantaged students" ("Frequently Asked Questions," 2011). Part of the TRiO trinity was Upward Bound (UB), a federally funded program to help specifically low-income, first generation students get into college. Although UB is a 45 years old program, and continues to expand to various parts of the United States, its effectiveness has come into question in the more conservative times of the twenty-first century. Recent research about the effectiveness of Upward Bound suggests that the program "has no detectable effect on the rate of...postsecondary enrollment" and "attracts mostly students who are...motivated to pursue postsecondary education" (US Department of Education, "Impacts," 2004, p. xvi). William Epstein a professor of social work at the University of Nevada, Las Vegas, in *Democracy without Decency* (2010), agrees that UB attracts the wrong students, because its cumulative result over the decades has been "creaming"—that is, choosing to serve students

already motivated to go to college, rather than those who are not motivated and are more in need of the program.

As a former participant in the UB program, Epstein's idea of "creaming" frustrated me, causing me to reflect upon my personal experiences with Upward Bound during high school. According to Epstein, I am a "creamer," meaning I was a high achieving, high-motivated high school student with parents who did not graduate from college with a bachelor's degree or higher and had a low income. Epstein believes that I, and people like me, should not receive assistance from Upward Bound because we would enroll in college without the program. However, Epstein, and other critics of UB who rely on the same "creaming" premise, misinterpret the actual purpose of Upward Bound—the program's intent is to help students from low-income, first generation college graduate families find the resources to enroll and excel in college. Most present research on the Upward Bound program, which evaluates its successes, focuses mostly on graduation statistics and retention rates, rather than speaking directly with former participants or administrators of the program.

This exploratory case study on the qualitative effects of Upward Bound examines Epstein's claims that UB "creams" its students by speaking with administrators of Surry Community College's UB program and former participants of the same program. I attempt here to set up a method to determine the personal value the program has had upon completers and administrators, as well as, emphasize the importance of Upward Bound for low socioeconomic students motivated to attend post secondary institutions who without the program would not have the needed resources.

**Author's Name:** Sarah Matulis

**Research Advisor:** Eric Hake, Janice Fuller, Jason Hunt

**Title:** Asia vs. the IMF: Why the Countries Fought Back

**ABSTRACT:** Recent international events have proven that theories and financial structures are not as stable as once thought. The crash of the United States housing market in 2007 and the near bankruptcy of Greece and other Eurozone countries have caused many to rethink conventional practices in economics. Mainstream economic theory, which in one form has been referred to as "The Washington Consensus" is beginning to crack, and without adjustment or resolution, global crises will continue to occur.

In response to the current crises in the United States and Europe, I have decided to re-examine the Asian Financial Crisis of 1997. By studying the Asian Financial crisis, I intend to discover the reason behind two elements of the crisis: first, whether or not the policies used by the International Monetary Fund were appropriate for the crisis, and second, why a country such as Thailand chose to accept IMF help while Malaysia, another country in the same situation, chose to reform their economic system on their own. This examination, I believe, will display details and events which prove that the "cookie-cutter" approach of the IMF is not as effective as an individualized and carefully structured growth plan. Since not all countries have the same background, tools, or political stability, the ideas of the Washington Consensus become less effective when trying to apply it to all developing countries.

**Author's Name:** Claire Robinson

**Research Advisor:** Dr. Beth Homan

**Title:** What Are You Wearing? Major Theories of Dress, Past and Present

**ABSTRACT:** *What Are You Wearing? Major Theories of Dress, Past and Present* is a senior thesis paper submitted in partial fulfillment of the requirements of the Catawba Honors Program. It attempts to answer the question "why do people dress the way that they do?" by reviewing historical theories, evaluating those theories based on qualitative research data, and developing an original dress theory that incorporates principles from historical theories. The ultimate result is a "unified dress theory" that can be applied both to an understanding of our dress behaviors and the practice of costume design.

**Author's Name:** Sarah Robinson

**Research Advisor:** Dr. Sheila Brownlow

**Title:** Determinants of Proenvironmental Behavior in College Students

**ABSTRACT:** College students serve as a barometer of the future society. This study examined students from a variety of academic fields at a liberal arts institution to study the effects of various sociodemographic factors and adolescent activities on environmental attitudes, specifically ecocentrism, anthropocentrism, and environmental apathy. Political liberalism and high usage of electronic devices predicted ecocentrism. Political conservatism, pursuing a non-natural science degree, being younger and playing sports predicted anthropocentrism. Environmental apathy was predicted by political conservatism, educated parents, growing up in a low income home and low usage of electronic devices. The implications these findings have in the field of environmental education and on the future of American society as a whole are discussed.

## **Modern Foreign Languages (Spanish)**

**Author's Name:** Tracy Brown  
**Research Advisor:** Dr. Miren Hodgson  
**Title:** El Camino de Santiago

**ABSTRACT:** In my paper, I investigate the Camino de Santiago, which is a pilgrimage to Santiago de compostela, Spain from the 9th and 10th century and from a modern perspective. I have investigated why pilgrims wanted to take this pilgrimage, who were these pilgrims, where they came from, their background etc. I have compared and contrasted the difference between the historical and the modern pilgrims of today. I will also talk about the routes that some of these pilgrims took.

**Author's Name:** Madelin Contreras  
**Research Advisor:** Dr. Miren Hodgson  
**Title:** The golden Age

**ABSTRACT:** For my project I am investigating how the Golden Age affected the culture of Spain. During my investigation I will be talking about how the religion also influences the culture in Spain. I am also going to talk about how the literature and art had a great impact during that century in Spain and the society.

**Author's Name:** Karina Hernandez  
**Research Advisor:** Dr. Miren Hodgson  
**Title:** The Spanish Civil War

**ABSTRACT:** My paper investigates the Spanish Civil War. I have focused in particular on what caused the civil war? What were the results of the civil war? How were the people and the economy impacted? I have found out that much of this was caused by the fall of the monarchy in Spain and the changes that the left wing government did. The right winged government did not like this and when the elections of 1934 came they won the power and revoked everything that the previous government established. Franco sided with Hitler to be able to take over Spain. After the war, the country continued to be in a state of war for nine more years under Franco's regime, which led to great poverty and persecution of the people.

**Author's Name:** Donald McIntyre  
**Research Advisor:** Dr. Miren Hodgson  
**Title:** The Discovery of American Crops and their Impact on the World

**ABSTRACT:** Why is Italian food most recognized by the tomatoes? Or why was Ireland so dependent on potatoes? And why is Indian food so spicy? In my research on the discovery and impact of American crops on the rest of the world, I learned the answers to these questions and more. Medieval European cuisine was rather bland and lacking in nutrition, so the spice trade with the Middle East and Asia was important to Europeans in order to add more flavor and nutrition to their diet, however the way to Asia was long and arduous. The need for a faster route to Asia, and the desire for spices, led to a search

for a shorter route to Asia in which Columbus suggested a route across the Atlantic, unaware of the landmass lying in the middle of the ocean which would later come to be known as the Americas. Upon the discovery of the different types of food and cultivation in this new continent, colonization ensued shortly followed by a period of intense trade known as the Colombian Exchange in which slaves, diseases, and more importantly, food, was exchanged in between the two continents. Some of the major types of food that were discovered in the Americas included the potato, tomatoes, peppers, turkeys, and chocolate. Although none of these foods were native to Europe, they flourished and became extremely important aspects of the diet, culture, and economy of Europe, as will be further explained in my presentation.

**Author's Name:** Chelsea Starr

**Research Advisor:** Dr. Miren Hodgson

**Title:** The Role of the Spanish Inquisition throughout the 15th-19th Centuries

**ABSTRACT:** This research explains the roles of the Spanish Inquisition throughout 15th-19th Century Spain. The presentation discusses a brief background of Spain before the Inquisition was put to practice and the reason of why it was created. In each century, there was a specific role of the Inquisition, and the research presented discusses what the role was, and what the motives were for persecution. In addition, by the end of this research, one will be able to see how, with various influences, the Spanish Inquisition changed over time.

## **Psychology**

**Author's Name:** David R Bowling

**Coauthors:** Jennifer McDonnell

**Research Advisor:** Dr. Sheila Brownlow

**Title:** Does Author Ethnicity Matter to the Evaluation of Blog Posts?

Participants evaluated the quality and importance of a blog according to the purported ethnicity of the author (Middle-Eastern or Anglo) and the essay quality. Persons high in Social Dominance Orientation (SDO), or the tendency to adhere to a social hierarchy, showed evidence of biases in that they found the blog by the Middle-Eastern man to be less credible and important than that supposedly written by an Anglo man; no such biases were seen among participants who did not evidence high SDO.

**Author's Name:** Megan Howard

**Coauthors:** Alec Thompson

**Research Advisor:** Dr. Sheila Brownlow

**Title:** THE HIGH COST OF CHEAP: MUSIC DOWNLOADS AND SONG LIKING

**ABSTRACT:** We examined the influence of song price (free vs. non-free) on liking of song downloads. Men and women participants listened to music, selected their favorites, and then either paid for or received for free their most favorite or least favorite song. After a week, men's attitudes toward their favorite song decreased but only if they got it for free. Women's liking of their preferred songs was not affected by the manipulation. The results are discussed in terms of the idea that free stuff is initially well-liked, but that after time worth is determined by having given up something (such as payment) in exchange for an object.

**Author's Name:** Katherine Zink

**Coauthors:** Maura Pantone, Michelle Lyons

**Research Advisor:** Dr. Sheila Brownlow

**Title:** Judgments of children's transgressions as a function of ethnicity.



**ABSTRACT:** Participants evaluated the transgressions of Latino and non-Latino children to determine whether ethnicity negatively impacted perceptions of children's behavior. Latino boys' misbehavior was seen as more purposeful and men participants perceived that Latino children should have known their behavior was wrong as compared to non-Latino children. While there were some influences of child ethnicity these were not strong; it is likely that child gender was a more important cue to expected behavior.