BOSTON COLLEGE
UNDERGRADUATE RESEARCH SYMPOSIUM
February 3, 2012

SCHEDULE OF EVENTS

12:30 PM  Opening Session  Fulton Honors Library

Welcome by Prof. Donald L. Hafner, Vice Provost
for Undergraduate Academic Affairs
Keynote Address by Prof. Jeremy Clarke, S.J., History Department

1:00 – 2:00 PM  Session I

Poster Presentations  Fulton Common
Panel One: Ancient Cultures, Modern Questions  Fulton Honors Library
Panel Two: Politics and Ethics  Fulton 210
Panel Three: Science and Technology at the Edge  Fulton 235
Panel Four: Issues in Education  Fulton 310

2:00 – 3:00 PM  Session II

Panel Five: The Arts in Many Forms  Fulton Honors Library
Panel Six: Economics and Social Change  Fulton 210
Panel Seven: Mathematics and Metaphysics  Fulton 235
Panel Eight: Powers of Persuasion  Fulton 310
Panel Nine: Healthcare Challenges  Fulton 425

3:00 – 4:00 PM  Session III

Panel Ten: Politics – Global and Local  Fulton Honors Library
Panel Eleven: Care-giving  Fulton 210
Panel Twelve: Searching for Identity  Fulton 235
Panel Thirteen: Discovery in Another Language  Fulton 310

4:00 – 4:45 PM  Closing Session: What Comes Next?  Fulton Honors Library
Matthew Alonsozana  
Class of 2014

Philippine Perspectives on Public Policy: Disaster Management and Local Health Initiatives

The most affluent area of the Philippines, Metro Manila, faces immense public policy challenges, due to a large population, insufficient infrastructure, a lack of government funds, poverty, and chronic corruption. Policy-makers at every level rightly have responded by incorporating better technology, vetting resource management, and pressing for organizational reform. Despite these well-intentioned efforts, health and policy deficiencies remain and will continue, because these efforts ignore municipal and local dynamics and their effect on the actual implementation of public policy. An understanding of local socio-economic and political dynamics is crucial, as can be seen in both disaster management and public health. Thus, policy-makers require a model that better synthesizes the collective and distributive capabilities of local communities. This project develops an “I.N. & O.U.T. System” model that can one day be a basic tool for designing more empowering and effective local policies.

Jesus Damian Baeza  
Class of 2012

Work-Based Learning Programs for Ethnically-Diverse Urban Youth

Education is of significant and increasing importance for access to employment and for higher earnings in the workplace. The unemployment rate for Americans is directly related to educational attainment, with higher unemployment rates for those having lower levels of education. Compared to their White, middle-class counterparts, Blacks, Latinos, and low-income students consistently experience significantly lower achievement test scores, teacher expectations, and resource allocations. In an effort to address this social injustice, researchers have explored work-based learning as key educational approaches to serving disadvantaged youth, particularly ethnically diverse youth in urban settings. Adolescent participation in the work force during high school is one way to teach specific skills and competencies necessary for future school-to-work-to-life transitions. This study draws upon interviews with urban youth to illuminate contextual factors that contribute to effective work-based learning programs.
Estelle Baik  
Class of 2012

The Consequences of Chinese Migration in Far East Russia

What are the consequences of the growing Chinese population in the Russian Far East, which by some estimates may number 5 million? From the time of Imperial Russia to the post-Soviet Union, the rate of Chinese immigration has fluctuated in the Far East. As research for my senior thesis, I did a two-month internship in Moscow, followed by field research in Khabarovsk. At the Ye T Gaidar Institute for Economic Public Policy in Moscow, I was an independent researcher for the International Trade Department. There I learned the necessary research skills to conduct an investigation of the so-called gravitational law of economics. Later, I did field research in Khabarovsk to find out more about the investment climate in the Russian Far East. The field research included interviews with government officials at City Hall and economists in Russian universities and institutes. I also obtained empirical data on Chinese workers from observations conducted at bazaars and job registration offices.

Anna Broido  
Class of 2012

Simulation Algorithms in Terms of Two Infection Models

A new field of math applied to biological systems is emerging that can help medical researchers better understand the details of a disease or how an epidemic spreads. The dynamics of such systems, and how they evolve in time, can be modeled using either deterministic or stochastic methods. This presentation will explain the difference between these two methods and examine a particular example of their use. The study focuses on three stochastic computational algorithms that can be used to numerically simulate the system. To compare these methods, the study uses them to analyze two stochastic infection models with different levels of complexity. One of these models describes the dynamics of a common hospital infection called VRE, and the other looks at the early infection of HIV within a host. The computational time and the precision of each algorithm are assessed to determine its relative efficiency.
Challenges in Affordable Health Care in the Philippines

As one of the poorest nations in Southeast Asia, the Philippines struggles to provide basic services for its citizens. One of the most inadequate services to Filipinos is health care. While spending five weeks in the capital city of Manila and the Cavite province, I discovered the great lengths to which patients must go in order to obtain and afford basic medical care. The immense gap between rich and poor Filipinos adds to the government’s predicament in providing a suitable health system for all. I spent most of my time working in a rural government-run hospital in Cavite City, where I developed an understanding of the political corruption and economic shortcomings that plague the health care system. This opportunity also enabled me to enhance my Tagalog (the national language) and nursing skills by working with an underserved patient population. Through interviews with health care leaders and clinical practice, this research project explores the social determinants of health in the Philippines and illuminates their critical need for health care reform.

A People without a Country: Filipino Nationals and the 1935 Filipino Repatriation Act

The 1935 Filipino Repatriation Act (FRA) was passed to encourage the repatriation of Filipino nationals in America back to the Philippines, offering free travel to the islands at the expense of the American government. Supported primarily by American nativists who wanted to restrict Filipino immigration, the FRA was an attempt to remove America’s Filipino population after the Tydings-McDuffie Act excluded Filipinos from immigrating to the United States. Although the Immigration and Naturalization Service (INS) estimated that the law would successfully repatriate ten to fifteen thousand Filipino nationals, by 1940 only 2,064 took advantage of the program. The primary objective of this research was to investigate the government’s failed attempt to repatriate Filipino nationals. The research suggests that the repatriation effort resembled disguised deportation more than voluntary repatriation, and that the act failed because most of the Filipino population refused to be removed permanently from the United States.
Max Chou  
Class of 2014

*Housing Bubbles in Japan, the United States, China: A Comparison of Government Policies toward Real Estate Bubbles*

As the cause of the 2008 financial crisis, the real estate bubble in the United States is well documented in its detrimental effects on economies, governments, and livelihoods. The bubble continues to dominate headlines and hurt both Main Street and Wall Street. Such “irrational exuberance” became a global epidemic, resulting in the current global economic woes. Japan, the United States, and China, the three largest economies in the world, all struggle with a housing bubble. Each country is in a different phase of the bubble -- Japan is the past, the US is the present, and China is the future. This shared dilemma across nations allows a comparison of policies and outcomes. This research project investigates the causes of bubbles, compares government responses, and proposes strategies for different stages of bubbles based on phase, resource, and policy considerations.

Nicole Crosby  
Class of 2014

*How Tourism and Culture Collide in Costa Rica*

Globalization has become a fact of modern economic life everywhere. While there are many lenses through which to study this intriguing new phenomenon, it is an undeniable reality. Through conversations with people in and around a small town in Costa Rica’s popular Guanacaste region, I studied the positive and negative effects of international tourism. Globalization is looked at regularly through the eyes of those “globalizing,” but rarely do the people whose lives and cultures are being most affected get to sit down and share their experiences. As I listened to the many different opinions about tourism in Costa Rica, and how it continues to affect the town of San Blas, I found that larger themes about globalization quickly emerged. Tourism aids the town in many ways, but it also brings with it new social problems.
Matthew DeMaio
Class of 2013

*Mobilizing Al-Aqaba: The Power of English in a Palestinian Village*

The small Palestinian village of Al-Aqaba is under threat of being erased. It is located in an area of the occupied West Bank, under complete Israeli civil and military control and on land coveted by the neighboring Israeli military bases. In the view of the Israeli Civil Administration, most of Al-Aqaba exists illegally and has therefore received a demolition order. I was asked to come to Al-Aqaba to teach English while I was studying Arabic for my Advanced Study Grant. While I was teaching, it became clear that the power of language for my Palestinian students exceeded that of facilitating communication. In Al-Aqaba, language gives people the power to resist occupation by opening channels for intellectual and legal mobility. Under the threat of erasure and restricted physical mobility, intellectual mobility is a matter of survival.

Jordan Dorney
Class of 2013

*Graecum est, non legitur: “It is Greek and therefore cannot be read”*

After 50 days of summer classes, morning to evening, with a few breaks for lunch and dinner amid verbal forms and vocabulary, it is little wonder that the title of my project is now less than true. With support from an Advanced Study Grant, I enrolled in the intensive Greek program at the Latin and Greek Institute at the CUNY Graduate Center. There are great challenges and rewards in learning Greek, and I look to encourage those outside the field of Classics to consider the study of ancient languages, and especially the study of Greek. My understanding of Plato and my encounter with classical political philosophy has been enriched greatly by the care that must go into the personal struggle of the translation process. The language skills I gained over the summer, fortified by continued study during the year, will form an integral part of my senior thesis.
Eun Kyung DuBois  
Class of 2014

Translation of Korean Children’s Literature

During the summer of 2011, I undertook a translation project of Korea’s award-winning young adult novel Syncher. The book takes place in a futuristic society and depicts the contemporary issues of over-digitalization and separation from nature. It also presents a hopeful alternative for the young people of this generation who cannot find a place in society. I had originally intended to translate a different Korean book for young adults, titled Bonjour Tour. Bonjour Tour was originally selected for its fresh approach to North-South relations from the perspective of a nine-year old boy living in France, but it proved inappropriate for translation into English because it manifested overtly racist and nationalistic themes. Overall, this project gave me experience both in the translation process and the wider issues a translator faces in translating children’s literature.

Ryan Folio  
Class of 2012

Confessions of the Lebanese Media: Media Coverage of Ethnic-Religious Communities in Beirut

In the wake of the Arab Spring, scholars have become increasingly concerned with the study of media as a means to understand conflict. Protesters have demonstrated that media systems are not simply dependent upon the influence of their governments, but can also play an independent role in shaping their countries’ political futures. The ACC-IAC Grant for Thesis Research allowed me to research the relationship between Lebanon’s highly sectarian confessional political system and the country’s media outlets. Over the course of four weeks, I lived in Beirut and conducted translations on a range of issues including NATO intervention in Libya, the Syrian uprising, and Iran. My project illustrates how media studies can provide a lens for viewing the different narratives presented by opposition members and government supporters in Syria’s modern crisis.
Jeffrey Hall  
Class of 2013

Working as a Diabetes Educator in Bolivia

Diabetes and hypertension are significant health concerns in Bolivia. As a result of extreme poverty and limited access to medical care, each year more and more people from rural communities suffer from diabetes because they simply haven’t been taught how to properly manage it. For this reason I spent four weeks last summer working in Bolivia as a diabetes educator. My experience showed the immense complexities of providing health care in the poorest country in South America, and I learned how to conduct discussions with patients in a way that is both clear and effective. The degree of knowledge patients had regarding diabetes varied widely, and an important dimension of my work was probing and evaluating how much the patient knew and understood. Learning to shape the discussion in such a way that would be most beneficial for the patient was one of the most important skills I learned from the experience. I strongly believe the linguistic, cultural, and clinical learning offered by this opportunity has immeasurably advanced my future goal of becoming a doctor focused on global health.

Kasia Hart  
Class of 2013

Urban Farming: An Exploration of Social Justice and Sustainability

As environmentalism becomes a rising topic of interest, many have questioned just how sustainable cities can be. However, there are many ways in which urban living can be more sustainable than rural or suburban lifestyles. In this study, I focused my research on food production in urban communities, and explored how sustainability can be incorporated into almost any form of urban living. My study extended past the realm of environmentalism and into the world of social justice. I explored cases of poor environmental quality and food accessibility to determine whether urban areas are more prone to environmental racism. Urban farming not only promotes local food production, but also tends to target underserved populations. Through conversations with community members who work for urban farming groups and independent research, I observed how issues of social justice and sustainability are inextricably linked, and realizing this connection is essential to future progress with these problems.
Alexander J. Hoffarth  
Class of 2013

“*The Glorious Burden*”: Great Political Leadership and the Reagan Presidency

Twenty-three years after Ronald Reagan addressed the nation from the White House for the final time, the 40th president continues to cast a long shadow over American politics. As president, Barack Obama has praised Reagan for “recognizing the American people’s hunger for accountability and change [and] putting our nation on a bold new path toward both.” Over the past year, Democrats and Republicans in the United States Congress have fought over Reagan’s legacy on taxes, spending, and the debt ceiling. In that same period, Republican presidential candidates have invoked Reagan’s name abundantly in debates. This project analyzes Reagan’s legacy in order to evaluate its relevance for understanding the current state of American politics. Using transcripts from interviews with members of Reagan’s Cabinet, White House staff, and campaign advisors, this project evaluates Reagan’s presidential leadership from the perspective of those who knew him most intimately. In light of the upcoming 2012 Presidential Election, this project assesses why Ronald Reagan continues as such an influential presence in American politics.

Christa Jean-Baptiste  
Class of 2012

*Persuasion and Auto Insurance: How Processing Routes Affect Advertisement Effectiveness*

This research project investigated the effectiveness of auto insurance advertisements among four demographic groups, using data collected for Liberty Mutual, Allstate, Progressive, and State Farm insurance companies. This project presents a brief analysis of several advertisements from each company, in an attempt to decipher the appeals being used and how those appeals may target specific demographic groups. Using the Elaboration Likelihood Model as the main framework, the analysis seeks conclusions about how the different demographic groups are processing the advertisements presented and how effective the advertisements are for those given groups. This is a qualitative research project that makes use of previously published works on similar topics, and its tentative conclusions need further investigation.
Since Americans began adopting Korean children in the midst of the Korean War, the number of adoptions has fluctuated through the decades, reaching a peak in the 1980s and then declining steadily. My research explores the societal and legal influences on the rise of international Korean adoptions in the 1970s. I conducted my research in Seoul, and after analyzing newspaper and magazine articles from the 1970s, I found that a nationalistic resistance against international adoptions had gained momentum throughout the decade, and there was an unsuccessful government attempt to replace international adoptions with domestic adoptions. From interviews with professionals, I found that the number of institutionalized children is increasing as a result of the unyielding number of relinquished children, government-imposed reductions on international adoptions, the stagnating number of domestic adoptions, and the lack of a well functioning foster care system. Although there is laudable effort to improve the lives of single mothers so that they have access to childcare options other than relinquishment, the age-old stigma against single motherhood persists, and the government has been slow to respond.

Karen Kovaka  
Class of 2012

Transcendental Geology: The Philosophical Significance of Merleau-Ponty

In his lecture course on Nature, the French philosopher Maurice Merleau-Ponty makes the intriguing claim that an ontology of Nature is the preferred way toward ontology in general. This project explores why he makes this claim and asks what philosophical significance this approach to ontology might have. Making use of Merleau-Ponty’s notions of chiasm and flesh as the most fundamental ontological truths, I argue that nature and history are related to one another according to the logic of the chiasm and that thinking of them in terms of this relationship opens up avenues for addressing long-standing problems in both philosophy of nature and philosophy of history. Specifically, I explore Merleau-Ponty’s response to the problem of a scientific historical methodology that is distinct from the methodology of the natural sciences and suggest that his response, in its reliance on the logic of chiasm, moves the problem beyond the state it reached in the work of Wilhem Dilthey and Edmund Husserl.
Binge eating and a variety of weight loss behaviors are common in college age populations. These behaviors can be problematic due to their link to obesity and eating disorders. Although these behaviors have been established in clinical samples, few researchers have investigated them in college students. This study investigated binge eating and behavioral correlates in overweight and obese college students. A cross-sectional web-based survey was conducted to characterize eating behaviors in college-age students. Binge eating was defined as eating, within a two-hour period, an amount of food greater than most people would eat, accompanied by the respondents’ sense that they could not stop eating or control how much they ate. The sample consisted of 487 undergraduate students who reported a body mass index (BMI) of greater than 25. The survey found that a significant number of overweight and obese students engage in binge eating behaviors. Nurses need to screen and assess the eating behaviors of young adults in order to promote change in behaviors and increase long-term health and well-being.
International scrutiny of France following its 2011 ban of the *nigab*, or burqa, in public places illustrated the difficulty that many foreigners had in comprehending the ban. Understanding France’s uneasiness towards religion in the public sphere requires an understanding of the French concept of *laïcité*. However, the rising popularity of extreme, right-wing groups like Jean-Marie Le Pen’s National Front and the increasing xenophobic rhetoric, sometimes directed towards North African Muslim immigrants, is concerning. My research focused on how words can be used to stigmatize a population, and whether those words reflect mainstream attitudes and values. In Bordeaux and Paris, I studied French print media’s reportage on the burqa ban, as well as French and North African Muslims. Noting differences in the newspapers’ and magazines’ region of publication, political leaning and target audience, I examined the diction used in commentary on the ban and evaluated whether the words used contained positive, negative, or neutral connotations, while assessing possible implications that can be construed from the articles’ content.

Logan Macomber
Class of 2012

*Formalizing a Tradition: Comhaltas’ Construction of Irish Musical Identity*

*Comhaltas Ceoltóirí Éireann*, which in Irish means “gathering of musicians of Ireland,” is the largest organization involved in the preservation and promotion of Irish traditional music. *Comhaltas’* success is evident in the growing number of young Irish traditional musicians around the world and in the increasing attendance at the *Fleadh Cheoil na hEireann*, or “All-Ireland Music Festival.” The organization, however, has become the sole powerful authority on “authentic” Irish traditional music and is becoming increasingly commercialized, which is potentially harmful to Ireland’s musical tradition. Formalizing a previously fluid tradition and placing it in a competitive setting risks compromising the sociability that is at the core of Irish traditional music, and a standardized, preservationist approach to Irish music prevents the music from progressing. My project assessed the effects that *Comhaltas* has had on the musical tradition that it was founded to preserve.
Gregory Manne  
Class of 2012

*Bill Clinton and the Cult of the Modern Presidency*

The compelling presidency and personality of Bill Clinton contributed to the development of an aura, even cult, surrounding the American presidency. The Clinton Administration was distinguished by the controversial but magnetic personalities of the President and First Lady, the passionate opinions they evoked in the public, and the unprecedented involvement of Bill Clinton in American popular culture at a time of great growth in the American media, all of which converged to create an obsession and sensation around the President. In addition to traditional sources such as newspapers, magazines and academic articles, I drew from less traditional historical sources to understand the Clinton presidency, such as quotations from late-night humorists and celebrities. My research project enabled me to gain a deeper understanding of how Bill and Hillary Clinton, much like the Roosevelts and Kennedys before them, evoked such passionate opinions among politicians, the media, and historians and became the center of a national sensation.

Joseph Manning  
Class of 2014

*The Impact of Politics on Renewable Energy Development in Rural Nova Scotia*

Nova Scotia is quickly becoming Canada’s maritime leader in renewable energy, recently establishing an energy goal of providing 40% of its energy needs from renewable sources by 2020. This is fitting, as Nova Scotia has the world’s strongest tides and thousands of miles of coastline that are pounded daily by wind and waves. But what policies are making this transition possible? What are the regulations and political attitudes that have facilitated and inhibited Nova Scotia’s renewable energy revolution? I will focus on the way in which Nova Scotia has chosen to implement renewable energy, the political atmosphere that surrounds the new technology, and the public perception of renewable energy projects. My research points toward aspects of Nova Scotia’s politics that might serve as a model for provinces/states that are looking to transition their electricity grid toward renewable energy. I will also assess the roadblocks and obstacles that still impede Nova Scotia in reaching its full potential as a renewable energy leader.
Thomas Mattera  
Class of 2013  

A Green Wave to Lift All Boats: The Nascent Green Collar Economy

A new vein of ecological resolutions has been found in what is now being labeled the “Green Collar Economy,” a movement functioning between federal, state, and local institutions to promote the creation of jobs that are uniquely environmental in their aims. Unlike many other ideas addressing the ecological crisis and sustainability, the Green Collar Economy initiative focuses on creating jobs for those most economically vulnerable, so that more of our society can benefit from ecologically friendly goods and services. However, not all has been utopian. Despite engaging in legislative campaigns, the movement finds itself estranged from the common consciousness of society. My research focused on a gaining a greater depth of knowledge in general terms, while concentrating on issues of water infrastructure and transportation. Through interviews and an exploration of governmental and non-governmental organization documents, I was able to gain a better grasp of both the progress and the obstacles to progress.

Brogan Matthews  
Class of 2013  

The Effects of Micro-Finance on Economic Growth in Cameroon

As the world economy becomes increasingly globalized, providing stability through culturally beneficial business structures tailored to the impoverished sector of the population has taken on increased importance. After the demonstrated success of the Grameen Bank and similar micro-credit organizations, micro-finance is now recognized as an effective means to spur entrepreneurship and thus empower struggling groups and individuals. I worked as a financial officer on the support staff for a relatively young, successful micro-credit operation run by an NGO called Reach Out Cameroon, located in Cameroon’s Southwest Region. My on-site activities included: organizing contact with beneficiaries to increase the frequency and scope of periodic reports, participating in the related money management advisement discussions, and orchestrating basic business management training seminars for existing beneficiaries. My contribution to Reach Out Cameroon included implementation of an HIV/AIDS Educational Program for children in the communities of Ekona, Muyuka, and Owe.
Alyssa McCarthy
Class of 2012

Children and Emotional Expression: Children’s Understanding of Norms about Emotion Expression in Public and Private Contexts

My project examines the development of children’s understanding of prototypical emotional expressions in public versus private places. Prior work on this topic has focused on children’s understanding of regulated emotional expressions, such as “display rules.” Such studies have shown, for example, that by the age of three years, children understand that one’s internal feelings are distinct from one’s emotional displays, and children have clear ideas about whether or not to express or hide one’s internal feelings. However, little is known about children’s understanding of unregulated expressions of emotion, for example, in situations where one feels an emotion and expresses it fully but disruptively? My findings reveal a developmental pattern in which children’s understanding of unregulated expressions of emotion is initially broad, but gradually becomes differentiated and more complex as children integrate the context of the scenario and the emotion being expressed when formulating judgments of appropriateness by the age of eight.

Nicholas LaDante McMillon
Class of 2012

A Long Hard Road: The Street Children of Quito, Ecuador

This research was to determine the principal factors that account for the large number of street children in Quito, and secondly, to analyze the history of child welfare policy in Ecuador and what organizations today are doing to develop a better life for the street children and their families. My interest in this issue arose from my personal observations during my four months of study abroad in Quito, and I have continued my research through literature about the street children of Quito. The objective of this research is to propose a solution that may not completely cure the problem, but which might at least bring progress. The key lies within the structure of the family and its financial stability. It is not clear that the government has enough influence upon society to improve this situation, which is why there is still an abundance of children on the streets.
Caitlin McNally
Class of 2012

Drawing as a Form of Distraction: The Role of Task, Preference, and Choice

Previous research has shown that distraction through art-making improves short-term mood. This study addresses two research questions. First, is art-making more effective at repairing mood than an entertaining game such as Tetris? Second, is art-making more effective when a participant prefers this activity? Participants were assigned to one of two groups, according to their preference for art-making. At the start of the study, participants were asked whether they would prefer to draw, or play a game, while in a bad mood. Afterwards, a negative mood was induced by asking participants to think of a personal disappointing event. Depending on the preference stated earlier (drawing vs. game), participants were assigned to a condition; the preferred condition, where participants were allowed to perform their preferred activity, and the non-preferred condition, where participants were asked to perform the non-preferred task. The hypothesis was that participants who are allowed to complete their preferred task would have more mood improvement. Furthermore, those participants who choose to draw would have the most mood improvement. If these hypotheses are correct, it can be concluded that art is better at short-term mood repair than other cognitively stimulating, distracting tasks, like games, and that freedom to perform a preferred task effects short-term mood repair.

Sarah Messer
Class of 2013

A Different Perspective: The French Experience of the World Wars

As a history major who aspires to become a history professor, I will need to be proficient in two foreign languages. I have studied French for many years. Given that my area of greatest academic interest is the social history of France during World War I, the most logical language to begin learning was German. I therefore used the Grant to attend an intensive four-week, summer language program at the Goethe Institut in Göttingen, Germany. While I learned more German than I would have thought possible in such a short period of time, I also acquired valuable skills in communicating across language barriers and discovered a great deal about the cultures of my fellow students.
Monocyte/Macrophage Activation and Heart Inflammation During HIV Infection

During human immunodeficiency virus (HIV), the innate immune responses' control of monocytes and macrophages becomes dysregulated, resulting in chronic macrophage activation. This dysregulation can have deleterious consequences, including inflammation that can lead to various inflammatory diseases. HIV-infected patients have a greater incidence of coronary atherosclerosis disease, although the cause remains unclear. Earlier studies showed that plasma levels of a marker of monocyte/macrophage activation, soluble CD163 (sCD163), were elevated in HIV+ individuals and correlated with non-calcified vulnerable cardiac plaque. We utilized the rhesus macaque model of AIDS to examine whether CD163 surface expression is up-regulated in heart tissue during SIV-infection, and we evaluated the involvement of macrophage activation in heart inflammation during HIV infection. We found that CD163+ macrophages were significantly elevated in the heart tissue of infected rhesus macaques with heart damage. We observed elevated sCD163 levels in the plasma of HIV-infected patients, including those with a known history of heart disease. In the human cases, CD163 surface expression was variable, and no clear correlation emerged between heart disease and the number of CD163+ macrophages present in heart tissue during HIV infection. These data suggest that chronic macrophage activation may play a role in the pathogenesis of inflammatory conditions of the heart.
Sophia Moradian  
Class of 2012

*Appropriate Self-Reliance Strategies for Refugees in the Middle East Region*

The livelihoods of the world’s displaced and marginalized populations are not at the forefront of state agendas, nor are they seen as a crucial issue facing the international community. Yet, their importance transcends state boundaries and should be of international concern. Refugees and displaced persons not only represent inherently vulnerable populations in host countries, but are also significant due to their contribution to the changing demographic structures in these countries, especially in the Middle East and North Africa region. Within this region, the displacement of over two million Iraqis since 2003 represents the largest movement of refugees since 1948. This research focused on the development of sustainable economic livelihoods for displaced Iraqis, and specifically in Jordan, which has the highest ratio of refugees to total population. The project seeks to determine whether there are long-term sustainable solutions for the Iraqi refugee population residing in Jordan and in the greater Middle East region.

Marye Moran  
Class of 2014

*Chinese Cross Currents: An Editorial Experience in Macau and Guangzhou*

This past summer, as an intern in Macau and Guangzhou, China, I explored the English language in an international context. I served as an editor for *Chinese Cross Currents*, a bilingual scholarly publication, and I read and attended editorial workshops for articles on various aspects of Asian culture and East-West relations. Living in Macau allowed me to see how the history of this former colonial city has influenced the present. As an editor for a multi-lingual translation of the Confucian Analects, I learned about the process of book publication and came to appreciate the nuances of the English language that were initially missed by the text’s non-native English-speaking author. Practicing Chinese language in my daily life, while working in English, allowed me to see the value in both linguistic traditions, and provided an interesting context for comparison.
Human Patient Simulation and Critical Thinking Skills in Nursing Students

Human Patient Simulation (HPS) is new, advanced educational technology being implemented by many colleges to challenge nursing students to think critically about real life situations that they may face as future nurses. HPS provides a safe learning environment that allows nursing students to practice critical thinking in simulated clinical settings, make mistakes, and learn from their actions. However, research has not clearly determined how effective learning with HPS is in promoting critical thinking skills. This study assessed the impact of Human Patient Simulator (HPS) practice on critical thinking dispositions in a sample of novice nursing students. The California Critical Thinking Disposition Inventory (CCTDI) was administered as a pre-test and post-test two weeks before and after a critical health assessment competency exam given in the campus nursing skills laboratory. Preliminary analysis of the results suggests disposition gains for individual students practicing critical assessment skills using HPS. Weighing the cost of using expensive HPS against the effectiveness of more traditional practice requires further study.

Generic Polynomials for Triangular Groups over Finite Fields

Let $G$ be a group and $K$ a field. A polynomial $f$ in $K(t_1,...,t_n; X)$ is $G$-generic over $K$ if the Galois group of $f(X)$ over $K(t_1,...,t_n)$ is $G$, and for any field extension $L$ of a field $K'$ containing $K$ with Galois group $G$, we have that $L$ is the splitting field of $f(X)$. This project looks at two methods of computing generic polynomials for groups of upper triangular matrices over finite fields containing $\mathbb{F}_q$. The first method utilizes Frobenius modules and always produces a generic polynomial. However, it is computationally difficult and requires many parameters. The second method modifies recursive polynomials found by Kemper to find nice generic polynomials for groups of matrices between the full upper triangular group and the full unipotent group.
Yuriy Pavlish  
Class of 2012

Composition in Musical Theater

Writing musical theater is a very tricky business. There are very few musical theater composition programs in universities and graduate schools in America, and those programs have not produced any of the greats in the field. With an Advanced Study Grant, I undertook my own academic and almost spiritual journey to help me write a full-length musical, which I have been working on since high school. I have learned a great deal about the professional world of theater, how compositions get produced there, and the elements that make for success. During this journey, I discovered the passion within me that drove me to write the musical in the first place, and once I found that, I quickly realized the unifying message of the work. I hope to finish the musical by the end of this semester and to find performance opportunities for it in Boston and New York.

Lisa Piccirillo  
Class of 2013

Reduced Colored Khovanov Homology of Alternating Knots

Khovanov homology associates to a knot a bigraded chain complex whose homology is a knot invariant (i.e., independent of the particular diagram used to describe the knot). Moreover, Khovanov homology 'categorifies' the classical Jones polynomial in the sense that the graded Euler characteristic of the Khovanov homology of a knot yields the Jones polynomial of the knot. It was proved by Manolescu and Ozsvath that the Khovanov homology of alternating (and, more generally, quasi-alternating) knots is homologically thin, hence determined by the Jones polynomial and the signature. In Categorifications of the Colored Jones Polynomial, Mikhail Khovanov describes a generalization of his construction categorifying the reduced colored Jones polynomial. A natural question to consider is whether Khovanov’s reduced colored Khovanov homology is also ‘homologically thin’ on alternating knots. My presentation will give a number of counterexamples to this question, obtained computationally using a Mathematica program, building upon Dror Bar-Natan’s FastKh algorithm contained in the open source KnotTheory package.
Matthew Richey  
Class of 2012

*Abecedaries and Methodology in Literacy Studies: The Tel Zayit Abecedary*

This project examines the form and function of Northwest Semitic abecedaries (ordered lists of alphabetic letters) from the Iron Age and asks whether these texts communicate anything about the extent of literacy and institutionalized education in early monarchic Israel (ca. 1000-800 BCE). The discovery of the Phoenician/Paleo-Hebrew Tel Zayit Abecedary in 2005 was immediately recognized as having significance for understanding the rise of national scripts in Iron II Israel. Based, however, on the archaeological context of the abecedary, the eclectic character of its letter forms and order, and its various enigmatic markings, it appears the Tel Zayit inscription speaks more to the marginalization of written culture than to its widespread adoption. Analysis of the Tel Zayit abecedary suggests that such texts’ artistry and prestige-related significance were generally as important, perhaps even more important than their textual and education-related significance. I argue that the location and character of ancient abecedaries often imply a perception of written culture as the esoteric, perhaps even magical, province of a literate elite, into which ordinary folk occasionally ventured but which they usually ignored altogether.

Brianna Sacco  
Class of 2012

*Binge Eating and Loss of Control in College-Age Women*

Binge eating is a disordered eating behavior that is frequently identified in college-age women. Like other disordered eating behaviors (e.g., purging, severe dieting, and fasting), it is linked to the development of obesity and full-syndrome eating disorders. Loss of control (LOC) is a cardinal feature of pathological binge eating behavior, yet little is known about how individuals interpret this concept. A web-based survey was conducted to seek detailed information about binge eating and LOC in college-age women. Women who reported having experienced LOC were asked to describe this phenomenon. The major categories identified in women's descriptions of LOC included not being able to stop eating, wanting to continue to eat, and a sense of frustration or anxiety about their behavior. A total of 1,341 women responded to the survey; 33.6% reported engaging in binge eating within the last 30 days, and 45% of these women reported a sense of LOC. These findings highlight the need for continued study of LOC in college-age women.
Alexandra Savinkina  
Class of 2013

*Paleo-Anthropological Exploration of Bronze Age Sites in Western Siberia*

Last summer, I worked with archaeologists from the Russian Institute of Archaeology and Ethnography on excavations at several sites in Western Siberia, on the banks of the Tartas River, four hours east of Novosibirsk. One site, named Tartas 1, was especially interesting: it is a burial ground containing over 1,000 graves spanning from the early Bronze Age through several civilizations that succeeded the Bronze Age culture. This burial ground will help researchers understand the transition of cultures that took place in Western Siberia from as early as the Late Neolithic Period through the Iron Age. Along with learning a lot about archaeology and the cultures that we studied, I was able to greatly improve my grasp of the Russian language. I immersed myself in life in the field, sleeping in a tent, cooking meals over a campfire, and bathing in the iron-red waters of the Tartas River. Through my experience, I lived the life of an archaeologist on the Russian steppe.

Maria Schneeweiss  
Class of 2014

*Is the Socialized Healthcare System of Germany More Just than the Healthcare System of the United States?*

Health is a basic human right. Nevertheless, in 2011 roughly 40 million people have no health insurance in the United States. European healthcare systems are frequently cited as examples of well-functioning systems that cost less, cover all residents, and produce better health outcomes. I designed a questionnaire to interview patients from a rural primary-care practice in Germany, several German physicians, and random German residents about their attitudes toward their healthcare system. Despite a general sense of contentment, a sizable fraction of patients complained about co-payments and lack of coverage (27%), particularly among retirees who often have a strong sense of entitlement. Taxpayers complained about the unfairness of shouldering the financial burden (32%) for the unemployed and the elderly. On the surface, the German healthcare system seems more just than the U.S. system. It is more egalitarian and comprehensive from a societal perspective, but apparently not from an individual-level perspective. Each society will need to find the right balance of personal rights and societal good that is acceptable to the majority of its citizens.
Magaret Scollan  
Class of 2014

The Bones of Black Friary: An Archeological Dig in County Meath, Ireland

Many an old Irish woman has whispered in an eerie brogue that “if you stumble at a grave, you’ll stumble into bad luck. And if you fall and touch the clay, you will most likely die by the end of the year.” Despite the dire warning in this superstition, I nevertheless participated in an archaeological dig in the cemetery of a mediaeval Irish monastery, Black Friary. There, I intertwined my interests in both biology and medieval history by expanding my knowledge of osteology, or the study of bones, which is used by archeologists to examine human remains in order to determine age, sex, conditions of health and growth, and death in a bio-cultural context. I learned the archaeological skills required to excavate human remains, and the techniques for determining different stresses and ailments the body was afflicted with during life. In addition, I expanded my knowledge of medieval Irish history, especially the effects of the Anglo-Norman invasion and settlement of eastern Ireland, and its affects on the indigenous Irish population.

Elizabeth Sierocinski  
Class of 2013

Charlas and Brigadistas: Health Care in Rural Nicaragua

While developed countries typically have many organized and technologically advanced hospitals, as well as ample community health resources, developing countries such as Nicaragua struggle to deliver adequate health care and information to poverty-stricken populations. Last summer, I spent six weeks in San Juan del Sur, Nicaragua, investigating public health outreach programs implemented to serve local and rural communities. I also sought to understand the unique role of volunteer community health workers, or brigadistas, in public health programs. As a volunteer for both the U.S. Navy and clinics in San Juan del Sur, I had the opportunity to participate in health programs offered by foreign workers as well as the Nicaraguan government. These hands-on experiences offered a unique glimpse into the difficulties faced by the fragile healthcare system, its dependency on foreign aid, and the long-term implications of current healthcare delivery methods on the overall health of Nicaraguans.
Shaun Slusarski  
Class of 2013  

*Violence and the Kingdom of God in South Africa*  

Preaching about the Kingdom of God was the central component of the ministry of Jesus in the gospels. The concept describes the eschatological reality in which the rule of God pervades all aspects of the world, and brings an end to poverty, oppression, and all other forms of dehumanization. The Kingdom was also an important concept in the theology of the antiapartheid movement in South Africa. However, the use of violence in the struggle remained at odds with this theology. While some theologians espoused blanket condemnations of all violence, many others, especially those associated with the world renowned *Kairos Document*, recognized the possibility of violence as a last resort in the struggle against apartheid. The theology of this struggle offers insights into how we might engage the relationship of violence with the Kingdom of God. This presentation focuses on the preferential option for the poor, the corporate nature of salvation, and the just war theory, in the context of apartheid South Africa, to explicate the relationship of these seemingly antithetical concepts and to reach a better understanding of humanity’s involvement in working for the Kingdom of God.

Charles Stewart III  
Class of 2013  

*James Joyce’s Landscapes: Dublin, Trieste, and Academia*  

James Joyce only lived in Dublin for the first twenty years of his life, and yet is the author most strongly associated with the city, since he wrote only about Dublin. He left in 1904 with his partner Nora, and settled in Trieste, which is where he finished *Dubliners*, brought *A Portrait of the Artist as a Young Man* to its final form, and started *Ulysses*. He called Trieste his second city, and spoke Triestine Italian at home with his family for the rest of his life. I traveled to Trieste to attend the Trieste Joyce School, in order to experience firsthand this city that was so important to Joyce but is never explicitly included in his works, and to the Dublin James Joyce Summer School in order to experience the only place Joyce ever wrote about. While at these schools, I also began my journey into the vast academic landscape around Joyce’s life and works, attending lectures and workshops with some of the most prominent Joycean scholars working today, including Fritz Senn, Finn Fordham, John McCourt, Luca Crispi, Sam Slote, and Terrence Killeen.
**Kelsey Swift**  
Class of 2013

*Refugee Experience of Displaced Iraqis: Language Study and Research in Jordan*

Over the past years, Jordan has become the first destination for a number of displaced persons in the Middle East, including the Palestinians who now make up a majority of the country’s population, and a large number of Iraqi refugees. Consequently, Jordan’s refugee-serving agencies face the distinct challenges associated with dealing with traumatized and transient migrant populations living in their country of first asylum. During my five weeks in the capital city of Amman, I took an intensive Arabic course and interned at the local Jesuit Refugee Services office, where I observed efforts to respond to these challenges through organized programs and individual mentoring. Through these observations and my previous work with resettlement agencies here in the United States, I gained a more complete and thorough understanding of the entire refugee experience and the journey a typical refugee travels before arriving in the United States.

**Ashley Thibodeau**  
Class of 2012

*Undergraduate Nursing Students Experiences in Community Health Clinicals in Haiti*

Very few nursing students have the opportunity to practice their skills abroad in non-traditional healthcare settings. Despite a growing interest in the impact of international health service trips on undergraduate student learning and future practice, there is a lack of research examining the change in perceptions of the students during their preparation, service, and return from the trip. This study provides a longitudinal analysis of the processes and transformation of students from various backgrounds, travel experiences, service experiences, and public health knowledge, as they complete their undergraduate nursing education. The ten participants are undergraduate nursing students who had their community health clinical in Haiti for ten days in January 2012. From semi-structured pre-trip interviews and personal narratives written at the beginning and end of the trip, the students’ expectations, goals, and experiences were analyzed for common themes. This study will help assess the value of international trips for nursing students and the impact on their education and future plans in nursing.
Daniel Tonkovich  
Class of 2013  

*Primer to Prosperity: Trends in Post-Recession Economic Development*

The recession of 2007-2009 drastically changed the economic landscape of the United States. Post-recession economic realities call upon communities to adopt new sustainable plans to achieve economic vitality. “Primer to Prosperity” will detail how communities must refocus, redirect, and reenergize their economic development efforts in light of the demands of the changing economic environment, and how the use of new metrics of success in economic development endeavors can help ensure long-term prosperity for communities.

Christy Tran  
Class of 2012  

*Defining the Role of Caregivers in Promoting Maternal Adaptation in Unintended Pregnancies*

The experience of pregnancy is a period of transition and can be understood as a developmental process in which women must take steps to adapt to physical, psychological, and social changes. Pregnancy is often described as a life crisis and can be overwhelming if the pregnancy is unintended. Research over the years has shown that chronic prenatal stress and anxiety associated with unintended pregnancies are correlated with postpartum depression, decreased maternal-infant interaction, and later development of childhood psychopathology. Difficulty during pregnancy is also predictive of increased problems during labor, preterm birth, low birth weight, infant mortality, and increased medical costs. Due to these risks and the high rates of unintended pregnancies, 45% to 65% of pregnancies in the U.S., the minimal amount research and regulation raise concern. The purpose of this study is to identify the psychosocial needs and views about desired services and decision making of women with unintended pregnancies who seek the help of pregnancy counselors or caregivers. This information will be used to more clearly define the role of caregivers with women during their experience in hopes of improving maternal and newborn outcomes in unintended pregnancies.
Margaret Veroneau  
Class of 2012  
(with Kelly Leonard)

*Binge Eating and Weight Loss Practices of Overweight and Obese College Students*

Binge eating and a variety of weight loss behaviors are common in college age populations. These behaviors can be problematic due to their link to obesity and eating disorders. Although these behaviors have been established in clinical samples, few researchers have investigated them in college students. This study investigated binge eating and behavioral correlates in overweight and obese college students. A cross-sectional web-based survey was conducted to characterize eating behaviors in college-age students. Binge eating was defined as eating, within a two-hour period, an amount of food greater than most people would eat, accompanied by the respondents’ sense that they could not stop eating or control how much they ate. The sample consisted of 487 undergraduate students who reported a body mass index (BMI) of greater than 25. The survey found that a significant number of overweight and obese students engage in binge eating behaviors. Nurses need to screen and assess the eating behaviors of young adults in order to promote change in behaviors and increase long-term health and well-being.

Alison Wawrzynek  
Class of 2014

*Globalism and Modern Cultural Identity: The Effects of English Proliferation in Multi-lingual Morocco*

While I was a volunteer English teacher working in Rabat, Morocco, I explored issues of globalism through an educational lens in a developing Islamic nation. English language skills are becoming more critical for advancement in the international economic system, and my teaching position provided an opportunity to analyze the effects of English on religious, cultural, and linguistic traditions. Despite limited resources and cultural challenges, students’ language and schooling are important determinants of how they view themselves in the international community. Because most Moroccans speak the Darija Arabic dialect and many have backgrounds in French, the linguistic diversity of the country created a backdrop to study the effects of English on political, economic, and social systems.
India Winter
Class of 2013

The Challenges of Artistic Media: The Work of Edward Betts

Edward Betts, a successful American artist, died in 2008. Unlike many artists, Betts painted in two vastly different styles -- representational watercolors and acrylic or oil abstractions -- throughout his career. This research project focused mainly on the dynamic between these two styles of painting. Betts admitted in his journal that he considered his abstract works his real paintings, and at least once he was asked by galleries to stop exhibiting watercolor paintings because they detracted from the salability of his oil paintings. At the same time, however, he was heavily involved with the American Watercolor Society, and he wrote multiple books on water media. Betts’ medium dichotomy raises larger issues about the hierarchy of artistic media in general. This research utilized the sketchbooks, working photographs, journals, and records left to the Ogunquit Museum of Art in the artist’s will.

William Seth Woody
Class of 2012

Reconciliation, Solidarity, and the Presence of Hope in a Post Genocide Rwanda

The Christian message of hope in suffering finds its greatest challenges and triumphs amidst the hills of Rwanda. As survivors of arguably the most intimately violent genocide in recorded history, the people of Rwanda collectively suffer from massive physiological and spiritual trauma. In a truly remarkable way, the spirit of hope has risen from the ashes of despair through a concerted Rwandan effort to promote reconciliation and solidarity, voiced primarily, although not exclusively, in the Christian context. These ideals of peace and justice form the core of a movement for social progress pioneered by faith-based social justice groups and the secular Tutsi government. To capture the emergence of this ideology of hope, my research was primarily focused on interviewing the leaders of the faith-based social justice initiatives.
The rise of Greek *poleis*, in tandem with increased trade with Near Eastern civilizations, brought the study of advanced mathematics to Ancient Greece in the 7th and 6th centuries BCE. Advancing on the work of their forebears, Greek intellectuals of the 5th and 4th centuries BCE began to theorize on how geometry ought to be studied. Different schools of mathematics arose, all of which competed for authority and recognition from their peers. At the center of this competition was the influential philosopher Plato. Against the belief that mathematics modeled the material world (a belief held by some Greek geometers), Plato argued that mathematics connected man with the divine. This presentation will discuss the pertinent evidence that Plato’s Academy had become an outlet for this brand of mathematics, and consider how Plato’s most influential student, the mathematician and astronomer Eudoxus of Cnidus, both conformed to and challenged his master’s conception of Greek Mathematics.