Clark University
Graduate Student Council

6th Annual
Multidisciplinary Conference

Wednesday, 2 April 2008
Grace and Lurie Conference Rooms
University Center

Clark University
950 Main Street
Worcester, MA, USA
The Alumni Association, along with President & Mrs. Bassett, cordially invite faculty, students and alumni of Clark University’s graduate programs to a reception at the Harrington House immediately following Dr. Addis’ address and the Graduate Student Council’s presentation of travel awards.

4:30–6:30 PM
122 Woodland Street
### Schedule

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<td>3:45–4:30</td>
<td>Keynote Address · Grace Conference Room&lt;br&gt;Dr. Michael Addis <strong>Science and Silence: The Challenge of Men’s Well-Being in the New Millennium</strong></td>
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<tr>
<td>4:30–6:30</td>
<td>Reception · Harrington House, 122 Woodland Street&lt;br&gt;Sponsored by the Alumni Association</td>
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Dr. Michael Addis

Keynote Speaker

Dr. Addis received a BA from the University of California at Berkeley in 1987 and a Ph.D. from the University of Washington at Seattle in 1995. He has been at Clark since 1995.

Dr. Addis is currently interested in theory and research related to men’s mental health. His recent work is focused on links between masculine gender socialization and responses to problems in living, including help-seeking behavior, substance abuse, and variations in the ways mental health problems are perceived and characterized. Dr. Addis has also conducted research on the process and outcome of psychotherapies for mood and anxiety disorders, and the relationships between clinical research and clinical practice in psychology. In 1997 he received the New Researcher Award from the Association for the Advancement of Behavior Therapy. In 2003 Dr. Addis received the David Shakow Early Career Award for contributions to the science and practice of clinical psychology from the American Psychological Association, and the Researcher of the Year award from the Society for the Psychological Study of Men and Masculinity. Dr. Addis teaches courses in the psychology of learning, men and masculinity, psychological ethics, and assessment.
Sessions and Abstracts

SESSION 1
Grace Conference Room
9:15–10:15
Getting to Know the Locals

Alexander Marriott
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History · Advisor: Drew R. McCoy
Republicanism at War: Worcester, Massachusetts and the War of 1812

This paper explores the incredibly bitter partisanship which consumed Worcester in the years before, during, and after the War of 1812. By examining this community, in the heart of a state thought to be a Federalist fiefdom we get a better picture of the diverse political makeup of the community and how both sides saw their positions as the continuation of true republicanism and themselves as the true heirs to the American Revolution.

Tara Stever
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History · Advisor: Wim Klooster
‘In Every Land:’ Transatlantic Social Networks and the First National Women’s Rights Convention in America

The first National Women’s Rights Convention, held in October 1850 in Worcester, Massachusetts, is a significant event for the history of women’s rights in the US, Canada, and Western Europe. Marking the beginning of the organized movement for women’s rights, convention delegates called for radical restructuring of political, social, and economic institutions. The efforts of the Worcester delegates had global consequences, as their proposed measures became a hallmark for international feminism. This research project demonstrates the ways in which the American women’s rights movement of the mid-nineteenth century existed as part of a larger international social rights movement. It reveals the ways in which social networks bound together feminists on both sides of the Atlantic, and how women in North America and Western Europe developed a collective identity to facilitate social change.

Claire Brill
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History · Advisor: Gil Pontius

Using GIS to contrast perceived versus preferred priorities for brownfield redevelopment in Worcester, MA

This paper compares the perceived priorities of decision-makers with the stated desires of stakeholders concerning brownfield redevelopment in the City of Worcester, MA. Redeveloping brownfields left over from Worcester’s industrial past is held as a critical strategy for the future of this city in central Massachusetts. However, the goals of this strategy vary across stakeholder groups. Key informants were surveyed regarding their perceptions of brownfield redevelopment. An inventory of Worcester brownfields was created from Massachusetts Department of Environmental Protection records. A multicriteria evaluation was carried out through Geographic Information Systems (GIS). This study found that while economic development and job creation are the apparent focus for one set of influential decision-makers, protection of natural resources and public health are important to another group of stakeholders. The outcomes for each end-use objective were examined to determine whether the goals for each could be met while focusing on only one redevelopment strategy. Results reveal the land parcels that satisfy the objectives for only one group, both groups, or neither group. Previously redeveloped sites were evaluated based on the same criteria to determine the extent to which existing and preferred priorities had been satisfied with these revitalization efforts. The results show that focusing on perceived priorities will not accomplish preferred objectives for brownfield redevelopment in Worcester.
Sustainability, vulnerability, and the socio-spatial impacts of brownfield redevelopment

Municipalities nationwide are eager to return contaminated properties to productive uses to help protect environmental and human health, reduce suburban sprawl, and revitalize inner city areas. Brownfield remediation is intended to mitigate human vulnerability to contamination and to contribute to the sustainability of the local human-environment system, yet the associated social impacts of this initiative are understudied. The objective of this research is to analyze whether brownfield redevelopment has the unintended consequence of increasing the vulnerability of particular subpopulations to additional hazards through geographic displacement or financial burden. Brownfields are often found in low-income areas with depressed property values, and economic revitalization is a key objective of brownfield redevelopment efforts. Governments carefully track economic outcomes, such as changes in property values; however, the distributional and social consequences of these increasing property values remain unexplored. Is environmental gentrification, characterized by the displacement of residents from a neighborhood because of increases in property values, one such impact? If so, how is brownfield redevelopment affecting the vulnerability of displaced residents to additional hazards, such as flooding or extreme temperatures? I will research brownfield redevelopment in New York City from 1990 to 2000 and develop an index of urban vulnerability to explore the associations between vulnerability, urban resilience, and environmental cleanups. There is a growing need for research on the socioeconomic impacts of brownfield redevelopment as such projects become increasingly common urban sustainability strategies across the country.

Navigating Irish-American Cultural Identity in the Major Works of James T. Farrell

This paper examines the ways in which the Irish-American author James T. Farrell navigates the expression of Irish-American cultural identity in early twentieth century Chicago. The Irish were one of the largest immigrant groups arriving to the United States during the nineteenth century. However, the process of assimilation was slow for the Irish because of their agricultural background and Catholicism. Farrell’s most successful works, the *Studs Lonigan* trilogy and the *Danny O’Neill* pentology explore third generation Irish immigrant identity formation. Using the realist tradition of his literary hero Theodore Dreiser, Farrell established four tropes with which an Irish immigrant can establish identity: the church, home, street, and park. The two contrasting characters navigate their identity in distinctly different ways considering they live in literally the same neighborhood. The character that clings to his Irish identity dies while the character who abandons his Irish identity lives. Ultimately, I aim to explore how Farrell’s depiction of the Irish in Chicago during the early twentieth century compliments the Irish-American identity in a larger national context and in today’s society. Today, approximately 40 million Americans consider themselves of Irish heritage but do not necessarily consider themselves ethnic. When did the Irish stop being ethnic and become American?
Daniel Roberts
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History · Advisor: Thomas Kuhne

War, Glory, Race, and Inaccuracy: The Film “300” Under Historical Scrutiny

In 2007 the film 300 opened with wide critical and popular success, particularly amongst men 14–25. However the film itself contains convenient inaccuracies which allow contemporary Americans to empathize with a fictional Spartan narrative: that of a small, righteous society unilaterally defending against murderous and cowardly religious extremists. Furthermore the film itself promotes blatant racist and homophobic themes which perpetuate an ideology of merciless, ultra masculine, racial warfare.

Alexis Herr
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History · Advisor: Debórah Dwork

Lawarance Langer’s “Choiceless Choices” and Primo Levi’s “Grey Zone:” A look at Adam Czerniakow and Chaim Rumkowski

In Primo Levi’s memoir Survival in Auschwitz, he elicits neither condemnation nor judgment when discussing the victims in Auschwitz. He refrains from doing so because he felt he did not have the moral authority or right to judge. Yet, he does carefully talk about the actions of different men in order to meditate on their characters. He would not necessarily agree with historian Lawarance Langer’s idea of “choiceless choices” because that would not necessitate critical examination of one’s actions. Langer argues that the decisions of Holocaust victims were made in “absence of humanly significant alternatives, that is, alternatives enabling an individual to make a decision, act on it, and accept the consequences, all within a framework that supports personal integrity and self-esteem.” Because of this, Langer argues their choices were “choiceless choices.” For Levi, it is of utmost importance to study the choices Holocaust victims made in order to try and reach some semblance of man’s character. Two men whose actions require such examination are the ghetto leaders Adam Czerniakow and Chaim Rumkowski. One will find that their actions were not “choiceless” and instead the lessons to be learned are found preciously in the choices they made.

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History · Advisor: Debórah Dwork

Commitment to Kill: The Origins of Genocidal Violence in the Former Yugoslavia, 1990 to the Present

My paper will evaluate explanations for the disintegration of Yugoslavia in the 1990s and the subsequent genocidal events and immense human misery that followed it. The hypothesis that precedes this evaluation is that genocidal events may be explained by a combination of situational and ideological causes. However, it seems almost self-evident that the choice of victims in genocidal events is what I would like to term a “foundational cause.” The Serb militiamen murdered Bosnian Muslims because they were Bosnian Muslims, and Croats drove hundreds of thousands of Serbs from their homes because they were Serbs. The perpetrators on each side knew beforehand who their victims should be. In a sense, they knew they were heading towards a genocidal situation. Therefore, a focal point of my brief analysis will be to examine the interplay between the two aforementioned causes, and perhaps to determine with some certainty whether it is proper to speak about a “foundational cause.”

My explanation draws on Hayden White’s “imagined communities” as well as on emotion-based analysis of human behavior. Most importantly, I will propose a new definition to the way popular discourses function in shaping “imagined communities” over time and during periods of crisis that result in genocidal violence. I also draw on psychological theory which demonstrates violence between one-time close neighbors, and I emphasize the phenomenon of torture in order to highlight the impact of popular discourses.
Session III
Grace Conference Room
10:20–11:20
Africa and the World

Diane Boucher
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History · Advisor: Janette Greenwood

Route 40: The Intersection of African Foreign Policy and American Civil Rights

This paper examines a brief period in US civil rights when emerging African nations and African diplomatic presence in Washington, DC and New York City forced the newly elected John F. Kennedy administration to act against racial discrimination. Restaurants and hotels along highway Route 40 refused to serve African diplomats eliciting international criticism. The Cold War context heightened concerns about US credibility and international coalition building. While African Americans in the NAACP, CORE and SNCC tested the bounds of discrimination in education, housing, employment, and public accommodations, officials in the State Department spearheaded a campaign to protect African diplomats and foreign policy interests. This study proposes the interstice created by African diplomats motivated African Americans to organize, act, and gain international support and attention for the domestic civil rights cause while co-opting the efforts of the State Department. James H. Meriwether argued contemporary Africa in the period from 1935 to 1961 played a role in the freedom struggle in black America in Proudly We Can Be Africans. Hopefully, this work presents evidence to reinforce Meriwether’s argument that emerging African nations provided inspiration and a common solidarity to break from oppression to African Americans.

Ashley Cataldo
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History · Advisor: Drew R. McCoy

The Pan-Africanist’s Burden: Alphæus Hunton and the Encyclopedia Africana

Alphæus Hunton, scholar, member of the National Negro Congress, board member of the Council on African Affairs, and neglected Pan-African historian, evidenced a clear Pan-Africanist sensibility even in his early scholarship and activism. Hunton consistently couched his Pan-Africanism in a broader rhetoric of peace, which remained politically convenient after World War II. He also emphasized the significance of workers’ rights and veered toward socialism, particularly in his historical scholarship and CAA pamphlets; this emphasis moved him closer toward criticism of US and European corporate interests abroad and led to his censure by the Dies Committee. Hunton eventually assumed many of the responsibilities for the Encyclopedia Africana, a project begun by Du Bois in the 1930s. This work of historical scholarship, which had been plagued by concerns over historical objectivity, intended to incorporate the anti-imperial and anti-colonial interests of Hunton and the CAA into an expansive project that, had it succeeded, most likely would have involved the most well-respected Africanists of the day. Concerned not solely with advancing socialism abroad and in the US so as to advance Pan-Africanism, the Encyclopedia project was intended to reveal the very weaknesses of subjectivity and historical dishonesty that had so often been used against Africans and their descendants in the diaspora.

Edward Marmon
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History · Advisor: Ousmane Power-Greene


In the 1960s, the political liberation of black Africans progressed alongside that of black Americans. AMSAC was formed at this time to promote interaction between the two groups. Its members included household names such as Langston Hughes, Thurgood Marshall, and Sidney Poitier. After opening an office in Lagos, inaugurating a journal with contributions from
numerous African heads of state, and hosting numerous Africana conferences, the Society’s activities ended in disgrace amidst a disclosure of CIA funding.

An assessment of AMSAC’s reaction to white rule on the continent reveals that it did not hesitate to criticize official US Africa policy, America’s major African trading partner, South Africa, or a key NATO ally, Portugal. The emergence of AMSAC’s calls for reform at this stage of the Cold War marked the resurgence of a liberal, but tactful Africana internationalism in the United States following the blacklisting of radical black Americans in the early 1950s (e.g., Robeson or DuBois).

The Society’s Executive Director taught Africa’s foremost proponent of total liberation, Kwame Nkrumah, as an undergraduate. This early connection foreshadowed the Society’s diverse and numerous bonds with southern Africa’s liberation fighters. The import of these initial relationships emerged in later years as international pressure became a key force in dismantling minority rule. AMSAC’s role in shaping America’s response to white rule in Africa was seminal, though largely unacknowledged. This paper explores its prescient support to southern African students, politicians, and artists before attacks on Apartheid reached a crescendo in the 1970s and 80s.

Emily Dabney
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History · Advisor: Debórah Dwork

Ham Goes to Rwanda: Racial Myth in the Colonial Period

In 1994, when the world was confronted with grisly images of the thousands of victims killed in the Rwandan genocide, many journalists initially labeled the conflict as an outburst of tribal hatred. This was wrong on many levels, not least of which was the fact that Rwanda does not have tribes, and therefore, no tribal hatred. What was at work was an issue that was much more complex.

In recent years, scholars have disseminated a new consensus about the origins of the Rwandan Genocide. This theory emphasizes the role of colonial manipulation in Rwanda in the early twentieth century in creating fixed racial groups that were and continue to be diametrically opposed in many ways. Scholars continue to debate about the origins and history of the Hutu and Tutsi in Rwanda, but most agree that the racialized conceptions of the two groups stem from German and Belgian policy during the colonial period. The Hutu and Tutsi racial groups did not emerge organically in pre-colonial Rwandan society, but were part of a racial myth devised by the colonists to justify the oppression and exploitation of native Rwandans.

Alicia Simonti
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IDCE · Advisors: Ron Eastman & John Rogan

Image Time Series Analysis for the Inference of Coral Reef Ecosystem Health

Recent evidence of changes in global climate leads to the question of the geographic extent and impacts on ocean productivity and the status of tropical coral reefs. New methods in remote sensing of coral reefs have proved to be imperative. In light of current obstacles in the remote sensing of coral reef health due to fine spatial heterogeneity, water column interference, and differentiation of varying benthic substrata, this research endeavors to apply newly developed methods of image time series analysis to various image series related to coral health. Time series analysis of remotely sensed imagery has traditionally been limited to Principal Components Analysis which decomposes the series into its major spatial and temporal dimensions of variability. New developments in image time series analysis include spatial and temporal Fourier and Wavelet Spectral Analysis which investigate the oscillatory behavior and several parametric and non-parametric image trend procedures based on the Mann-Kendall test and the robust Theil-Sen slope which determine linear and monotonic trends. Additionally, phenological trends in ocean productivity can be investigated with a procedure based on trend analysis of annual harmonic regression coefficients. Furthermore, this software development is capable of removing seasonality in order to better investigate change over time and space. These newly developed methodologies can prove quite beneficial in the study of coral reef health via remote sensing indirectly by investigating numerous factors which impact corals. These factors can be investigated and
correlated simultaneously, including, but not limited to, chlorophyll a concentration, sea surface temperature, ocean currents, aerosols, sea surface height, and non-remotely sensed data such as climatic teleconnections. Initial findings show significant trends in chlorophyll a concentration, sea surface temperature, and sea level height that could have implications for coral reef health.

Elia Machado
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Geography · Advisors: Ron Eastman & Billie Turner

*Climate variability and dengue in Mexico: Towards a climate-based Early Warning System*

Dengue is the most important vector-borne virus disease worldwide according to the World Health Organization, which estimates 50 to 100 millions of cases annually. In the recent decades its prevalence has increased dramatically placing about 2.5 billion people at risk globally. Since the 70s, the re-emergence of dengue in previously eradicated areas of the Americas is particularly alarming, posing a serious health concern for which no vaccine is available yet.

Although the factors related to dengue incidence are complex and their interaction not well understood, the relevance of climate on vector-borne diseases transmission is widely accepted. Recently, much interest has grown on developing climate based Early Warning Systems for disease epidemics preparedness, but few are operational and much research is still needed, particularly at interannual scales.

This paper investigates the relationship between climatic variability and dengue incidence as part of project aimed at examining the potential for an Early Warning System based on empirical modeling of vulnerability to the disease in Mexico. The methodology draws on several time series techniques to analyze remotely sensed climatic and environmental variables along with their correspondent series of dengue morbidity to determine the degree to which these variables can explain the spatio-temporal patterns of dengue incidence. Preliminary results along with a recently developed set of GIS based tools for time series analysis will be presented. Finally, an initial assessment of the feasibility of developing an Early Warning System for dengue in Mexico will be made.

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Biology · Advisor: Todd Livdahl

*Phylogeography, Genetic Variability, and Population structure of Aedes albopictus populations in the Eastern US*

This research addresses the genetic relationship, structure, and evolutionary history of Asian tiger mosquito (Aedes albopictus) populations, which have recently invaded eastern US.

Aedes albopictus is a medically significant mosquito, and has been associated with the transmission of dengue fever, West Nile Virus, eastern equine encephalitis (EEE), heartworm, and potentially, St. Louis encephalitis. This research describes the movement, colonization dynamic, and gene flow of the mosquito Aedes albopictus in eastern US. This information is critical and essential for the control of A. albopictus and will also help in the development of mitigation strategies for invasive species which may serve as vectors of disease.

While several studies have targeted genetic relationships between global A. albopictus populations with those in the US, the genetic relationships among US populations are mostly unknown. Previous studies of the genetic relationships within US populations have produced ambiguous results. It has been suggested that Wolbachia, an intracellular parasite bacteria, could interfere with its host mating system and cause a reduction in the host mitochondrial genome variability. The effect of the intracellular parasite Wolbachia in A. albopictus populations remains unidentified. This study uses sequences of mitochondrial non-coding regions to assess the genetic variation and identify gene flow patterns among populations. In addition, this study assess the presence of the intracellular parasite Wolbachia and its effects over A. albopictus’ mitochondria variability.
Poster Session
Atrium
11:30–12:40

Tara Arthur
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IDCE · Advisor: Kiran Asher

Women in Sport

What are the variant impacts of sport on women around the world particularly in developing nations? This poster attempts to explore the potential correlations between women in sport, education, Gender-related development (GDI), rape and HIV/AIDS.

William A. Coniglio
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Physics · Advisor: Charles Agosta

Measurement and modeling of speed in a rowing boat

Rowing coaches and athletes have an obvious desire to understand their performance during a practice session or race. Optimizing the mechanics and style of the stroke is useful in achieving optimum performance, as the speed of the boat fluctuates according to power and body movement of the athletes. Commercially available instrumentation records only the overall speed of the boat, averaged over several meters. I have developed a simple and robust technique to record the progress of a boat every 6 cm using readily available equipment and show recordings from high school races in Spring 2007. I also present a simple one-dimensional model of speed fluctuation during the stroke and show changes in speed behavior for several different input parameters.

Ashley Curtis
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Additional Authors: John Rogan, Jennifer Miller

Evaluating the effects of pseudo-absences and modeling approaches on animal species distributions

The use of conservation planning tools in association with increased availability of geographic information systems and environmental data (variables) has resulted in widespread exploration and application of species distribution models (SDMs). SDMs are developed by relating information on plant or animal species distributions to environmental gradients. Most of the traditional statistical methods used in SDMs require information on species presence and absence, however many of the data sources contain information only on species presence (i.e., presence-only data). Given cost and time constraints conservation managers require effective ways to use these presence-only data (for example, by generating "pseudo-absence" data) to explore species distribution or species habitat use. The purpose of this paper is to test the influence of variations in pseudo-absence data sampling methods in animal species distribution modeling across the South American Continent. Presence-only data representing the narrowly-distributed Microryzomys minutus (Rice Rat) and the broadly-distributed Bradypus variegatus (Brown-throated three-toed Sloth), are used in this study. Environmental variables representing various direct and resource gradients are combined with 

AVHRR NDVI time series and human footprint data (i.e., roads, urban areas) to constrain animal potential spatial distributions. The similarity of species distribution maps among three modeling approaches (i.e., random, random-clustered and stratified) was quantified. All of the quantitative species distribution models were good predictors of the validation data set, but the spatial distribution of mapped habitats varied considerably among models. Results suggest that choice of model and variable set could influence the identification of target areas for conservation.
Predator Detection in Embryonic Threespine Stickleback Allows for Avoidance of Cannibalism.

The ability to use cues from the surrounding environment in learning to avoid predation can greatly enhance survival. Nest predation, common in most ecosystems, puts sedentary eggs or embryos, and juveniles at the greatest risk of predation. The ability for embryos to learn to recognize predators would allow individuals to respond accordingly after hatching, increasing survival. Threespine stickleback have rapidly radiated from oceanic into freshwater ecosystems of the northwestern United States and Canada, as a result, stickleback embryos are exposed to a wide variety of nest predators, including cannibalistic adult stickleback. Therefore, embryonic stickleback must be able to learn predator cues in order to increase survival post-hatching. Threespine stickleback embryos were exposed to one of three predator cues (goldfish, sculpin or cannibalistic stickleback), as both embryos and fry. Fry showed stronger response to predators on a non-embryo diet if they had been exposed to that predator on an embryo diet during their development. Controls showed no change in response. This indicates that developing embryos can learn to recognize predators, including cannibalistic stickleback, enhancing post-hatching survival, and thus aiding their radiation into novel ecosystems.

Genetic analysis of wing development in drosophila

Dumpy (dp) encodes a massive extracellular matrix (ECM) component involved in epidermal-cuticle attachment. The dp locus is genetically complex, with several distinct allele classes differentially affecting development of various tissues. In an effort to better understand the role of Dp and the ECM in organogenesis, we have initiated a search for genes that interact with dp during wing development.

The oblique class of dp alleles (dpo) produces a truncation at the distal tip of the wing, reducing the size of the wing blade without disturbing development of veins or the margin. During a search for amontillado on chromosome 3, four alleles of a different gene were isolated (doc; Michael Bender laboratory, University of Georgia). The gene was named docked because of the truncated wing phenotype produced when doc is heterozygous with a deficiency for the region; three additional doc alleles were shown to be lethal over the same deficiency (Rayburn et al., 2003). Noting the similarity between the doc and dpo wing phenotype, we obtained the doc alleles to determine what doc encodes, and how Doc may participate with Dp during wing development.

We also identified a suppressor of dumpy on X chromosome and is yet to mapped. We also conducted a deficiency screen analysis to identify genes that interact with dumpy and found strong interaction notch and pvr (PIGF- and VEGF-receptor related).

Contribution of Land-use and Land-cover Change Modeling to Carbon Credit Estimation: The Case Study of Bolivia

This research presents systematic comparisons of a pair of Land-Use/Cover Change (LUCC) modules that are used to implement baseline modeling of forestry-based carbon offset projects. The pair is: Land Change Modeler (LCM) and Geomod, and they can estimate CO₂ emissions based on simulated deforestation. This research categorizes each module’s characteristics. Both LUCC modules are applied to a case study in Bolivia, land-cover maps of 1986 and 1994 are used to predict land-cover of 2000; the resulting maps are compared to an observed map of 2000. LCM and Geomod predict future deforestation at the pixel-level, based on an estimated amount of deforestation and suitability maps. An estimated quantity predicts the amount of change, while a suitability map predicts the location of change. Linear extrapolation and Markov Chain are compared to assess quantity prediction. Geomod, logistic regression and multiple layer perceptron are compared to assess location prediction. Map comparison
measurements, such as Relative Operating Characteristics (ROC), figure of merit and multiple resolution analysis, are applied to assess prediction accuracy. Results for the Bolivia case show that there are no substantial differences between the two modules. Users’ subjective inputs are unavoidable for all of them. To conclude, the most important aspect of baseline deforestation modeling is its transparency and how do modules compare in this respect.

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Biology · Advisor: John Baker

Offspring Performance and Survival Based on Environmental Conditions

Reproduction is a critical part of the survival of any population and is studied most often by assessing life history traits. Life histories are co-adapted traits, such as body size, number of offspring, offspring size and gestation time that relate to an individual’s strategy for reproduction. Offspring size is thought to be one of the most important traits to the survival of a female’s lineage. Selection acts on offspring size, but can vary in its intensity and direction in different environments. Two environmental factors that I explored are how offspring size affects competitive ability in two different environmental scenarios, “varying food availability” and “tannin staining of the water.” Food supply has been demonstrated to have a strong effect on both growth and performance of young organisms. Differences in early growth have been demonstrated to effect later stages of life. Consequently, the ability to feed efficiently as a young organism is crucial to the future success of the organism even in later life stages. Less well studied is how tannins or water color effects fish in the early weeks of their life, despite their strong relationship with egg size in our Alaskan populations. Tannins are polyphenols that are produced by several plant species and bind proteins. Assessing the effects of the environment may shed light on the mechanism of selection on life history traits such as egg size.

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Physics · Advisor: Charles Agosta
Additional Authors: Kyuil Cho, William A. Coniglio, Charles Agosta

Determination of the Pauli Paramagnetic Limit in Quasi 2-D Superconductors

We have calculated the Pauli paramagnetic limit ($H_p$) for different quasi 2D superconductors using a semi-empirical method. We then compared the calculated Pauli paramagnetic limits to penetration depth data obtained using a tunnel diode oscillator technique at low temperatures in a swept applied magnetic field. The organic superconductors examined are layered such that their behavior is dependent on their orientation to the applied magnetic field. In order to eliminate the effect of vortex dynamics, we examined data taken with the conducting layers oriented parallel to the applied magnetic field. For one of these materials, $\kappa$-(BEDT-TTF)$_2$Cu(NCS)$_2$, we find that eliminating vortex effects leaves us with one remaining feature in the data that may correspond to $H_p$. We also find that the material $\beta''$-(BEDT-TTF)$_2$SF$_5$CH$_2$CF$_2$SO$_3$ exhibits a change in slope for temperature versus upper critical field when the upper critical field exceeds the calculated $H_p$. In addition, many of the examined quasi 2D superconductors, including the above organic superconductors and CeCoIn$_5$, exhibit upper critical fields that exceed their calculated $H_p$ suggesting some type of non-conventional superconductivity.
Session V
Grace Conference Room
12:40–1:40
Gender in a Globalizing World

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Gender, Poverty and Social Equity in Community Forest of Nepal

This paper seeks to examine how social inclusion issues are addressed in the Community Forest (CF) Program in Nepal. The program started with the aim to protect denuded forest and now has become an important means to contribute to poverty reduction. The CF program has also been seen as important because the implementation process is participatory, and it is managed by the users group. This paper is trying to explore whether user group members, particularly poor, women, and socially excluded groups are 1) receiving equal share of forest products; 2) whether poor, women, and socially excluded groups are included in decision making process; and 3) whether CFs have institutional arrangements that favor poor, women and socially excluded groups to receive benefits from the CF. The study involves the secondary literature review and the presentation of case studies from the field. The field study was carried out in four community forests of two districts namely Doli in Western Region and Lalitpur in Central Region of Nepal. The detail analyses of the study revealed that participation of women, poor, and socially excluded groups in decision making is poor that results in discrimination in distribution of forest products, such as fuelwood, grass, and fodder to poor and excluded households.

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Sport and Agency for Women

Sport is more than physical activity; it is also a means for empowering women with skills that can be used in all facets of life. Recognizing the urgency for programs targeting women’s livelihood, sports development can offer multiple benefits. The lack of bodily autonomy and the globalization pressures for women to fit a particular image are creating a new world crisis. The benefit of sport is often overlooked as a means for education and empowerment; especially in the context of the developing world. This paper examines the ability of sport as an agency for women coping with challenges of adolescence, health and societal pressures.

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Home-based Women Workers in India

The growth of the Indian economy and population is leading to the growth of a large informal sector. A large population in this sector are home-based women workers. However, sustainable organization of this segment has always been a challenge for the government, NGOs and policy makers. Various approaches have been undertaken by the government and non-government organizations. But these approaches have not been consistently effective. This paper addresses approaches for the successful sustainable organization of home-based women workers in India, targeting migrant women workers who contribute to the informal sector. These women belong to the populations who are migrating constantly from rural to urban parts of the country for subsistence. As a result cities are unable to absorb this excessive flow of labor. Therefore, workers are forced to work in the unorganized sector especially women. These women work in unhealthy condition at home at low wages for commercial production activities such as the garment industry, handicrafts and food processing. In this paper, I review non government organizational methods and programs within this sector aiming to support small producer groups. This paper concludes that all of these programs and approaches have gone through phases of successes and failures. Self Employed Women Association (SEWA), a trade union non-organization is actively working in this sector with its integrated need based approaches. This paper aims to find how small NGO can use SEWA’s organizational strategy. Based on these findings, I propose an action plan for an effective implementation of development programs for home-based women workers.
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*The Mythology of American “Liberators”*

Currently Americans perceive their role in the Holocaust as that of the noble “Liberating” force. What is not known is that American concentration camp “Liberation” was initially and largely chaotic, unintentional, and at times violent. The current mythology of America’s role and responsibility in “Liberation” is predominantly the result of American soldiers initially trying to find meaning in their service. However the realities of the Cold War made discussion of the Holocaust politically inconvenient. The mythology was then recreated once again in the post-Vietnam era in an attempt to reconstruct a sense of exceptionalism in a largely discredited American military.

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*Confronting History: Workshops on Confronting Nazi Past in Austrian Families*

This presentation provides an overview of *Confronting Nazi Past in Austrian Families* workshops I co-created and conducted in and around Vienna, Austria. These interactive seminars help Austrians to begin to take responsibility for Austria’s perpetrator role in the Holocaust, as well as for familial involvement in Nazi crimes. Workshop design is based on a “Diversity Management” approach to intercultural difference and dialogue and each one- or two-day long session includes information on Austrian Nazi history, the modern Austrian Jewish community, and provides information about experiences with and possibilities for Austrian-Jewish dialogue. In addition, workshops provide participants the time and space to begin discussing difficult family and community histories regarding the Holocaust and to meet others interested in finding constructive ways to deal with painful pasts. Experiences with workshop participants have spurred my research and work on Austria’s postwar identity and the way individuals deal with the past in public and private lives.

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*The Complexity of Genocide Denial: Armenian Genocide and the Holocaust*

When the President of Iran speaks at Columbia University and conspiracy theories surrounding 9/11 are topics for the History Channel to explore, the complexity regarding the nature of history and the limits of “free speech” are again important issues. Recently, Holocaust denier David Irving and British National Party chairman Nick Griffin’s 2007 public lecture at Oxford incited riots. This followed the United States’ failure to approve a bill recognizing the Armenian Genocide. Adding to the dilemma and quagmire of denial, former Secretary of State Madeline Albright, who continually apologizes for the inaction of the US during the Rwandan Genocide, aggressively blocked Congressional reaffirmation of the Armenian Genocide.

Political controversy, Neo-Nazism, and genocide denial are not new concerns; however, scholars have characteristically addressed the issue of denial through the lens of specific cases. What is lost in solitary research, or more importantly, what is the benefit of a comparative study, of genocide denial? This presentation will elucidate the motivation, distinctions, and similarities between denial of the Armenian Genocide and the Holocaust, in turn providing a general framework for understanding genocide denial. On the whole, the Armenian case is shaped by politically motivated state-sponsored denial, while Holocaust denial is consistently driven by individuals steeped in ideology. Bridging the gap between these historical structures, we may now be facing a new hybrid form of denial that is rooted in both historical ideology and political motivation. To be sure, denial of genocide is not an issue which is fading from the public realm.
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*In Search of a Categorization: Homosexuality, Nazism, and the Holocaust*

Nazi Germany’s persecution of homosexuality was known prior to 1980, yet few historians considered it an important topic. A “guide book” purchased at any former-Nazi concentration camp site museum, apart from a solitary mention at Buchenwald, does not refer to persecution of homosexuality. In fact, until as recently as 1993, the United States Holocaust Memorial Museum was the first major institution to include and integrate the subject into its permanent exhibition and educational material.

Nazism and sexuality does not fit easily into any existing explanatory framework. This is particularly evident when examining homosexuality and Nazism. In steady fluctuation and rooted in racial ideology, Nazism thus radicalized sexuality. The “Reich Central Office for Combating Homosexuality and Abortion” rigorously investigated incidences of homosexuality up to the day of surrender in 1945. In a state of constant debate and examination, Heinrich Himmler and the Nazi hierarchy continually questioned the genesis of homosexuality. Behavioral or biological origin would define the fate of homosexuality in Nazi Germany and occupied Europe. Nazi policy and practice of male homosexuality escalated to castration and death. The defeat of Nazi Germany ended radicalized persecution, however individual experience was sustained postwar with isolation: officially, politically and socially. Nazi ideology, policy, and individuals enforced persecution, postwar politics, however, maintains marginalization. This presentation will argue how ideology, individuals, and politics (both past and present) play important roles in dealing with homosexuality and Nazism. The debate concerning definition and categorization of homosexuality is not limited to Nazi Germany, it is an ever-present specter.
terms of process and input, from traditional professional decisions, and finally examining, and evaluating the possibilities for the success of these projects. While the initiatives examined are very different, what they have in common is that they all address key ideas missing from professionally led development including changes in the institutions governing public housing, forging equal partnerships with outside organizations, focusing on equity and justice within these institutions, and more nuanced spatial treatments of public housing, which move away from environmental determinist viewpoints. By addressing these issues these initiatives are placing these residents in better stead to address larger questions of economic disadvantage, and civic and social isolation. Most importantly these initiatives are proving the ability of public housing residents to control their own homes.

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Does gasteromycetization in the Agaricomycotina represent an evolutionary dead end or a key innovation? A sample study from the Sclerodermatineae.

Gasteroid fungi are identified by fruiting structures, which are analogous to mushrooms, where their spores are developed in cavities and have lost the ability to be forcibly discharged. There are several gasteroid lineages within the mushroom forming clade Agaricomycotina. Some examples include the genera Lycoperdon, Geastrum, Rhizopogon and Scleroderma, each representing a lineage that has evolved the gasteroid morphology independently. Since the loss of ballistospory is thought to be irreversible, it is assumed that the evolution of the gasteroid morphology represents a “one-way door,” rendering the taxon unable to re-evolve the mushroom morphology. This limitation in the ability of these fungi to diversify may be seen as an evolutionary constraint, and thus becoming an evolutionary “dead-end.” The boletoid-gasteroid clade Sclerodermatineae represents several genera, each with a unique gasteroid morphology. Recent molecular studies have failed to resolve the relationship between these well-supported genera, despite the development and analysis of a five-gene dataset. The lack of resolution in this group suggests a period of rapid evolution upon the development of a gasteroid morphology (gasteromycetization). As a result, the gasteromycetization of the Sclerodermatineae may represent a key evolutionary innovation. Recently, new analytical methods have been developed to test for the presence of key innovations using molecular and morphological data. These methods were used to analyze the five-gene dataset for the Sclerodermatineae, and were also applied to available datasets of other gasteroid lineages to evaluate the question: does gasteromycetization in the Agaricomycotina represent an evolutionary dead end, or a key innovation?

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Using Hyperspectral imagery to map the distribution of Fraxinus species and Emerald Ash Borer host trees in Michigan and Ohio, USA.

This study examines the use of remotely sensed data for detecting and mapping ash trees. Emerald Ash Borer Agrilus planipennis (EAB) is a bark beetle that has spread in recent years in Michigan and Ohio. It causes severe damage to ash trees leading to their death. Ground survey is difficult and early detection and mapping using remotely sensed data would prove valuable for foresters. The study uses air/f_lown hyperspectral and LiDAR data to attempt to discriminate among tree species. During the first stage of the analysis, ratios of the hyperspectral bands were created to help in the discrimination. The Lidar images were used to create a mask to remove areas not covered by trees. In a second stage, Principal Component Analyses were carried out on group of ratios to select a number of ratios as input bands for the classification. In a third stage, the selected ratios were run through a Principal Component Analysis and a Canonical Components Analysis. The components obtained were used during the classification. Both a pixel classification and object based classification were carried out. Four soft classifiers were
used: Typicality based on the Mahalanobis distance, Classification Tree, K Nearest Neighbour and the posterior probably of MLC. The preliminary results from the pixel classification suggest that we are able to distinguish some trees but discrimination remains difficult among the various classes.

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Experience Induced Changes in Taste

We are studying experience-induced plasticity in taste physiology, using human psychophysical techniques. (1) In a counterbalanced design, consisting of three pre-treatment test conditions and two treatment conditions, participants were either not pre-tested, pre-tested with glucose, or pre-tested with water. All then briefly treated their tongues with a fructose solution or water once each day for 10 days. On Day 11 or 12, all were tested with glucose. (2) Glucose pre-tested, fructose treated participants either continued or stopped treatment for another 10 days and were tested again at 22–3 and 33–4 days. The results show that experience with fructose significantly increases taste discrimination for the sugar, glucose, and without continued treatment, the effect reverses after 22–34 days.

(3) Now, we are testing the hypothesis that a taste receptor subunit, which is thought to bind both Na-cyclamate and acesulfame-K, but at different receptor sites, modulates the binding of sugars to the receptor and is responsible for the plasticity. Since this subunit resides in the umami (taste of MSG) receptor, as well as the sweet receptor, we are testing the effects of experience on MSG, as well as sugar taste.

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Economics · Advisor: Amy Ickowitz

The Incentive Effects of Debt Relief Initiatives in Highly Indebted Low Income Countries

The paper investigates the incentive effects of external debt relief initiatives in countries characterized by “bad behavior” and large external debts. A model is presented to show that a combination of debt reduction and reforms are essential to improve the economic performance in low income economies characterized by rent seeking. The empirical results show that the institution of the Heavily Indebted Poor Countries (HIPC) initiative in 1996 has mitigated the effect of “bad behavior.” Moreover, there is evidence of an average improvement in performance, measured as real GDP per capita growth, by about 1.4 percent in the period following the HIPC initiative.

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The World Bank’s Educational Policies

In the 1960s the WB began to fund educational projects. Over time the World Bank’s focus in the educational sector changed considerably. In the beginning the focus was on manpower planning, a half a century later it funds EFA (Education for All) and tries to foster the knowledge society. The core argument I will make is that the underlying neoliberal development agenda of the World Bank also informs the implementation of current educational policies. In my work I am critiquing this and will suggest alternatives that will enable Third World countries in Africa to implement sustainable educational policies.
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*The Persistence of Corruption*

This paper empirically tests the proposition that corruption has persisted for over two decades. Using corruption ratings data from the Political Risk Services Group, International Country Risk Guide on 110 countries from 1984 through 2006 it seeks to determine whether or not corruption has actually exhibited persistence over this period. Applying Markov Transition Chain Matrices to this dataset, I found that that approximately 73 percent of the countries in the sample were characterized by persistent corruption. This finding remained unchallenged after controlling for regional and level of development differences among nations.

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*The Temptation to Instrumentalize the Trials of Genocide Perpetrators: Transitional Justice between International and Domestic Courts*

Concepts such as "delivery of justice" and "penal responsibility" were and still are extremely appealing to general public in the aftermath of mass murder and genocide. Understandably, the victims, their relatives and community feel a legitimate desire for retribution. Also the emerging post-genocide elites “often related with the Ancien Regime” and the international community, appear to be interested to implement the principles of criminal law and to support the process of establishing the penal responsibility for those guilty of mass murder. However, the practice seems to be less concern with ethics and justice but more prosaic. My presentation focuses on one aspect of transitional justice, namely on the trials of the genocide perpetrators. Usually, these trials are organized either by states or by various international institutions. While examining the transitional justice process in some of the most notorious cases of mass murder and genocide, one aspect of its procedures seems to be particularly recurrent: the temptation to instrumentalize the trials of the perpetrators by the post-genocide national and/or international agents. This temptation can be traced in the aftermath of the majority of mass murder and genocides that took place during the twentieth century, especially in the cases of domestic trials. I will discuss several genocide cases of the twentieth century from a transitional justice perspective and the way this process was instrumentalized for various purposes, such as political power, legitimacy, national building, and collective identity.
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The faculty and staff of all the graduate programs at Clark, for providing a constructive and intellectually stimulating academic environment, without which we could not do our research.

The Alumni Association, for their continued support through yearly sponsorship of the reception following this conference.

President and Mrs. Bassett, for opening their home: a wonderful conclusion to the day’s events.


Past conference planning committees, who have created goodwill toward this event and a basis for our planning.

Graduate Student Council

http://clarku.edu/~gsc/

This year’s conference planning committee included Alexander Marriott, Scott Broo, Tara Stever, Braunen Smith, Andy Coniglio, and Tara Arthur. The Travel Awards Committee consisted of Andy Coniglio, Professor Mary-Ellen Boyle, Professor Paul Posner, Scott Broo, and Justin Golub.

The Graduate Student Council at Clark University holds open meetings every two weeks at a time convenient for its membership. (Currently Thursdays at noon.) We plan events, sit on University committees, and provide graduate student input to administrators making decisions. In addition to the officers, each department is allowed two representatives. If there is an opening in your department, there is no formal process to become a council member. Simply start coming to the meetings and voice your opinion. Agenda items frequently include event planning, appropriation requests, health insurance and stipends, University policy, and campus services. Pizza and beverages accompany each meeting.

Officers of the Council include Co-presidents Alexander Marriott and Scott Broo, Treasurer Tara Stever, Communications Chair Braunen Smith, and Secretary Andy Coniglio. Active department representatives include Justin Golub, Biology / Marco Milones, Geography / Daniel Roberts, History / and Tara Arthur, IDCE. Isaac Tesfay serves as GSCOM liason.

Email gsc@clarku.edu for information on our next meeting.
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