

# Bates College

2007 – 2008 Honors Theses Abstracts

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**2007-2008 HONORS RECIPIENTS**

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**THEATER**

Samuel G. Leichter

\*Denotes a combined thesis

\*\*Denotes a double major with  
2 separate theses

## American Cultural Studies

**Margaret M. Kinney**

*Advisor:* Anita Charles

### Socioeconomic Integration in Urban Public Schools

Historically, cities have used race as a factor in integrating neighborhood schools to compensate for the de facto segregation among neighborhoods. This summer, a set of court cases brought before the Supreme Court significantly restricted the use of race as a factor in determining public school placement. Many current racial integration programs are, by default, unconstitutional, which may lead to a shift in the demographics of a number of school districts. To circumvent this shift, several schools have replaced race with socioeconomic status as an important factor in making school assignments. My thesis investigates the feasibility and effectiveness of these new school assignment programs. Through academic research, interviews with public school graduates and administrators, and participant observation in school districts registration processes, I analyze the effectiveness of this program. Effectiveness is defined in terms of students' performance on standardized tests and college attendance rates. I speculate that the use of socioeconomic status as a defining factor in school assignment policies will be as successful as well-implemented racial integration programs in creating equal and balanced schools that allow students to excel academically.

## Anthropology

**Kristofer T. Jönsson**

*Advisor:* Charles V. Carnegie

### The Way Life Should Be? – Negotiating Maine as “Vacationland”

This thesis investigates what Maine means to the people who live there, as well as to visiting tourists. In particular, it asks three pertinent questions: How has the “Vacationland” slogan risen to prominence as Maine’s alternative state motto? How does Maine perpetuate the image of untouched wilderness when, in fact, the vast forests have a long history of management and settlement? Why is tourism a political issue in many Maine communities? To answer these questions, this thesis draws on a case study of the Plum Creek Corporation’s land development proposal for Moosehead

Lake as well as ethnographic fieldwork conducted in and around Greenville, a town in Piscataquis County, Maine. It then applies anthropological scholarship to provide a framework for studying tourism in Maine as an anthropological subject. Specifically, the analysis is informed by Michel Foucault's idea of the medical gaze, which is applied to tourism by John Urry, and Dennison Nash's and Valene Smith's scholarship on the anthropology of tourism. The purpose of this project is to connect the tourist encounter in Maine, local concerns regarding tourist development, and anthropology in order to understand how Mainers and tourists alike negotiate the notion of Maine as "Vacationland."

**Emily A. Maistrellis**

*Advisor:* Heather Lindkvist

### **Creating Healthy Moms and Healthy Babies through Childbirth Education**

Since the introduction of Lamaze in the 1970s, childbirth education (CBE) classes have become a normalized stage of childbirth preparation for many expectant mothers in the United States. Furthermore, many CBE classes in the United States are sponsored by medical institutions, placing authoritative birth knowledge under the domain of biomedicine. As such, biomedical practice carries the potential to influence women's expectations of labor and delivery in a hospital setting. This thesis utilizes the conceptual frameworks of authoritative knowledge, embodiment, and the body politic in an examination of the production of authoritative birth knowledge and how it shapes childbirth as an object of culture. I employ participant observation at local CBE classes and interviews with CBE instructors, cultural brokers, and women's healthcare providers in order to analyze how "native" and foreign-born expectant mothers access resources about childbirth in the hospital setting, and, in turn, how hospitals facilitate CBE, labor, and delivery for these women. Based on extensive literary research and an analysis of course materials and popular literature on childbirth, I contend that once integrated in the biomedical setting, CBE curriculum produces knowledge and regulates the process of birth, managing women's expectations and embodiment in the birth setting.

**David M. Miller**

*Advisors:* Loring Danforth and Sonja K. Pieck

**Common Property and Contentious Values: A Political Ecology of the Management of Sea Turtles in Isla Cañas, Panamá**

In this thesis I examine the struggles and interdependence between turtles and people both fighting to survive on Isla Cañas, Panama. The beach of Isla Cañas serves as a critical nesting site for Olive Ridley sea turtles, and the sale of turtle eggs has been essential to the community's economy. Since 1975, the Panamanian government and local community have co-managed a project to commercialize as well as conserve the eggs. I examine values and power struggles at local, national, and transnational scales as they are negotiated by local people directly involved in the turtle project. Ethnographic fieldwork conducted on Isla Cañas in 2006 and 2007 creates a base for understanding local realities within a global context. Focusing on conceptions of ownership and practices of management, I present an anthropologically grounded political ecology that teases apart the complex meanings, values, and ethics behind consumption and conservation of sea turtle eggs. By understanding the values behind power struggles in Isla Cañas, I hope to inform more effective policy. I conclude by situating the Isla Cañas case study within the context of global conservation and poverty, showing how this unique case puts into clear relief the complicated tensions between conservation and development worldwide.

**Michelle B. Sisco**

*Advisor:* Steven Kemper

**They Sing Only for the Widow and Not for the Man: Oppari Crying Songs as a Subversive Discourse to Tamil Hierarchies of Gender and Caste**

With the support of the Hoffman Research Support Grant and the Hamill Prize, and with the assistance of a nonprofit organization, the National Folklore Support Centre (NFSC), I conducted research on South Indian performance from a feminist perspective in the Tamil city of Chennai, India. As a nonpaid intern working for the NFSC, I spent my eight weeks in Chennai conducting ethnographic fieldwork with low-caste widows, who lived in a small fishing village on the coast of the Bay of Bengal. My research centered on *Oppari* performance, a ritual lament sung by *dalit* widows at funerals and other death-related ceremonies. My primary informants were four professional *Oppari* singers whose livelihood depended on invitations to perform at funerals in the area. My anthropology thesis examines *Oppari*

performance as a form of subversion to patriarchal and brahminical ideologies.

## Classical and Medieval Studies

**Anne L. Barton**

*Advisor:* Dolores O'Higgins

### **A Woman with a Past: Briseis in the *Iliad***

At first glance, the *Iliad* presents Briseis as a symbol of Achilles' standing among the Greeks. Yet, the evolving narrative hints at a deeper relationship with Achilles. Since the whole plot springs from Achilles' wrath at Agamemnon's seizure of Briseis, her role in the epic bears further investigation. Briseis exists in the story in a variety of different roles. Throughout the epic she is called a prize, slave, girl, daughter, woman, and widow. Coming to terms with the ambiguities inherent in her dynamic identity is necessary to understanding her power and influence in the story. Furthermore, her multifaceted identity demonstrates that she had a past that has been overlooked. Although the *Iliad* does not immediately recount the details of Briseis' life, it nevertheless sheds a growing light on her story, allowing the audience to recognize her true value, identity, and importance.

**Alison Rose Schwartz**

*Advisor:* Dolores O'Higgins

### **Omens: The Undiscovered Voice of the Common Roman**

Omens are like a thread in the blanket of Roman politics and every day life. Romans looked to solicited and unsolicited omens in times of crisis and of triumph. They observed and studied omens in three major categories: the auspices (bird behavior), haruspication (the entrails of sacrificed animals), and *ostenta* (unsolicited omens). The Senate deployed omens when they wished to dispose of or counteract specific popular leaders of Rome, sometimes with detrimental effects. In turn, the Roman populace responded using the same medium: signs and portents expressing the hopes and anguish of non-elites. *Ostenta*, such as monstrous births, are the primary focus of this thesis. I argue that the lives and accounts of the populist leaders Tiberius Gracchus, Gaius Gracchus, Marius, and Julius Caesar were magnets for omens. The Roman people found their own voice through these leaders and the omens that surrounded them.

## Economics

**Emmanuel F. Drabo**

*Advisor:* Michael Murray

### **Discrimination and Research on Drugs for Rare Diseases: Empirical Evidence**

Severe distortions in the drugs market limit pharmaceutical companies' incentives to develop drugs designed for the poor of the world, so-called "orphan" drugs. Firms fear they may not sell enough drugs to recoup the costs of research and development. Government purchase commitments of orphan drugs could provide incentives to develop orphan drugs, but may not suffice in correcting these distortions. Thus it is reasonable to consider more direct government involvement in drug development if the government is efficient in advancing the development of orphan drugs. However, very little or nothing is known about the government's effectiveness in spurring drug development of any sort. This research uses cancer clinical trials data to empirically study the relationship between the funding source of drug research and the success rate of the research. Two types of government funding are considered. In the indirect type, the government simply provides research grants through institutions such as the NCI, NIH, CDC, and NSF. In the direct type, the government oversees the research and fully owns it.

## English

**Claire M. Jakimetz**

*Advisor:* Cristina Malcolmson

### **Pleasure and Improvements in Seventeenth-Century Travel Writing and the Early Royal Society of London**

On June 16, 1647, Richard Ligon, a penniless Englishman in social exile, boarded the *Achilles* bound for the Caribbean. In subsequent years, he compiled a skillfully vivid account of his travels, including images of the landscape, island women, and the sugar plantation labor system. At about the same time, the Royal Society of London for the Improvement of Natural Knowledge (RS) was promoting new methods of experimental philosophy and exploration by drawing from travel testimonies, including Ligon's work. However, the genre's innately Eurocentric foreign ideology and varied literary style, and thus its propensity to drift between fact and fantasy,

underline the problematically subjective use of this material as a source of “scientific” inquiry. This thesis considers Ligon’s narrative as a characteristic piece of travel writing, one which uses a hybrid literary approach; an aesthetically creative source of artistic “pleasure,” and a contrastingly informative, classificatory guide with an aim to contribute useful “improvements.” After thorough analysis of the Ligon narrative, it is compared to Boyle’s *General Heads* published in 1666, which demonstrates the RS’s foreign interests. It serves as a response to the travel genre’s language and mode of inquiry, inscribing more appropriate parameters for eliciting and structuring experimental data.

**James B. Lynch**

*Advisor:* Charles Nero

### **Meditations on the Fleuve: Codifying the Verse of Rap Music**

Over the past thirty years, hip-hop has transcended artistic expression and has been classified as a culture. It has made strong case for people belonging to its generation. Yet it has faced many criticisms: claims of violent, unequal, and egotistical behavior have detracted from the art form, stigmatizing it for having a warped system of values. This thesis attempts to dispel such misplaced notions. The thesis goes to the text of rap music in order to deconstruct symbols and motivations using both a sharp listening ear and literary theory to justify rap as a literature formed by tradition. By examining the grammar and aesthetics of rap’s verse, patterns and paths to reasoning form as a way of understanding a linguistic progression of literature. Using post-structuralism, symbolic anthropology and archetypal criticism to read rap, this thesis makes a comparison to the *roman fleuve*, (French for “novel stream.”) Rap verse’s production can be read as a series of novels, each one complete in itself, dealing with one central character in an era of national life, or successive generations of a family.

**Kathryn Allison Mann – See Philosophy**

**Franz J. Ritt**

*Advisor:* Steven Dillon

### **The Poetics of the Book-Epic in Heaney, Dove, and Graham**

Seamus Heaney’s *Station Island* (1985), Rita Dove’s *Mother Love* (1995), and Jorie Graham’s *The Errancy* (1997) might be considered



collections of poems, or even sequences of thematically organized poems, but neither description is entirely accurate because it does not account for each book's cohesiveness and ambition, the effect of which takes the book to a higher level of organization. Though not organized as a single long poem in the epic tradition, these volumes exhibit numerous examples of epic qualities and volume-wide unities that comprise what I describe as a "book-epic": a book of poems whose themes, conventions, plots, and organization demand that it be considered as a self-sufficient unit comprised of the poems and sections within it. It is a middle ground that bridges the gap between a shorter singular poem and the more traditional epic. They are a distinct variety of modern epic, one that exists within epic tradition but also challenges the limits of the genre. The book-epic seeks to establish a different kind of epic-quality unit, one that borrows both from the short modern poem and from the ancient and more recent epics to create a unit with epic qualities, without sacrificing the formal and specific details of shorter poems.

**Nina C. Schwabe**

*Advisor:* Cristina Malcolmson

**Appeals for Justice in a Post-Katrina America: Artistic Responses to the Hurricane and Levee Disaster in New Orleans**

The rap artist Baby Boy Da Prince of New Orleans raps in his track "This is the Way We Live" that "Katrina couldn't stop us baby." This thesis evaluates the value of personal expression from New Orleans post-hurricanes Katrina and Rita, both for the New Orleans community (in the city and in the diaspora) and for the nation as a whole. I analyze three different modes of expression about post-Katrina New Orleans. First I examine post-Katrina related hip-hop songs and how they are interpreted within the hip-hop community and outside. In the second chapter, I critique a post-Katrina documentary film and a television show, examining how artists choose to represent the tragedy of Hurricane Katrina and how this is interpreted by audiences. In the last chapter, I examine a play and an oral history project, assessing their audiences and political impact. Combined, these projects offer a multimedia sense of community to New Orleans residents in New Orleans and in the New Orleans diaspora. They also offer some impetus for social change on a national level.

**Emmy A. Spencer**

*Advisor:* Robert Farnsworth

**Not Your Garden Variety: H.D., McGuckian, and Glück Reinvent the Flower**

Throughout much of the literary and cultural history of the West, flower motifs have been used to represent femininity. Flowers are considered delicate, soft, beautiful, bright, enchanting, pristine, innocent, and preserved, and likewise is the ideal female body. These ideals may appear flattering in their emphasis on beauty and softness, however, they also restrict women to fragility and weakness. This thesis, with a foundation in the history of flower language and art, analyzes the authority with which three Western women poets of this century claim the flower image in their work and interpret and/or challenge its preexisting feminine associations with various poetic strategies. H.D., an American imagist poet; Medbh McGuckian, an Irish post-modern poet; and Louise Glück, an American postmodern poet, have written collections devoted to flower imagery: *The Sea Garden*, *The Flower Master*, and *The Wild Iris*, respectively. Each of these collections represents different feminist perspectives: while H.D.'s poems emphasize the need to change and reimagine beauty and femininity, McGuckian's poems celebrate the domestic while still distorting conventional floral symbols with dissociating poetic language. Finally, Glück personifies her flowers with distinctly religious and spiritual themes, at the same time returning to issues of sex and love. These analyses aim to reveal authentic conceptions of femininity and beauty by offering the voices of woman poets who themselves have grappled with the rigid gender ideals of Western modernity.

**Ethan R. A. Warren**

*Advisor:* Sanford Freedman

**Orlando Moderno: Recasting Ariosto in the Twenty-First Century**

In 1532, Ludovico Ariosto published the *Orlando Furioso*, an epic poem that synthesized the key elements of the genre and turned them inside out, emerging as a mammoth work (10,000 lines longer than Homer's *Odyssey* and *Iliad* combined). It is equal parts romance, parody, adventure, satire and has become one of the most influential works in the history of literature. Among the authors to have drawn primary inspiration from the *Orlando Furioso* are Shakespeare, Cervantes, and Milton, none of whose work would have existed without the *Furioso*. In 1805, William Roscoe, observed, "On a work so well known, and so universally read, as the *Orlando Furioso*, any observations would now be superfluous." Indeed, in the introduction to her 1973

translation of *Orlando Furioso*, Barbara Reynolds writes that the poem “has entwined itself with English literature to a degree exceeded only by Dante’s *Divina Commedia* and the love poetry of Petrarch.” This thesis considers Reynolds’ translation—the most recent full English translation of the work—in order to compare its effectiveness with several other historic translations, including John Harrington’s influential but much-maligned 1591 translation. Through use of a modern translation, new issues are raised and explored in terms of reading Ariosto within a modern context. The thesis also studies and analyzes Robert Greene’s 1588 stage adaptation of the poem, a unique representation in its dizzying mix-and-match approach to the source material, keeping true to some elements of the text, diverging wildly from others, and transposing plot points to create a patchwork text that is as much Greene as it is Ariosto. By focusing on translation and adaptation this thesis explores what it means to read Ariosto in the twenty-first century.

## Environmental Studies

David M. Miller – See Anthropology

## Geology

Stephanie Higgins

Advisor: J. Dykstra Eusden, Jr.

### Quantifying and Interpreting the Variable Alignment of a Mineral Lamination in the Presidential Range, NH

400 million years ago, long, thin andalusite crystals grew throughout the schists of the Presidential Range. While the crystals were growing, the region was undergoing compressive stress from the Acadian Orogeny, the collision of Avalon (modern-day Maine) with Laurentia (the rest of North America). Because the crystals grew during the collision, they grew in a direction perpendicular to compressive stress from the event. In a five-week summer field season, the orientations of 5,000 crystals were measured, and their alignment was quantified. Crystal alignment is being used as a proxy for strain – that is, places with highly aligned crystals are thought to have borne high strain from the Acadian Orogeny, and places with randomly aligned crystals are thought to have borne very low strain. The ways in which strain is partitioned through bedrock members of differing compositions and

thicknesses is also examined. Ultimately, this information is being used to generate the first map of Acadian strain in the region.

## History

**Jacob L. McChesney**

*Advisor:* Hilmar Jensen

### **The Green Mountain Niche: The Development of Vermont Farming from Pre-Colonization to Modern Day**

Where once rural farms dominated the countryside of Vermont, forests now have reclaimed much of their former kingdom. Nevertheless, the pastoral image of the state persists in the American consciousness and, increasingly today, in some locales, efforts are made to bring rundown farmsteads back to the former glory of their heyday. Most of the rejuvenated barns, however, will likely never house a cow again; animal homes are now more profitable as tourist destinations. The functioning operations that survive tend toward a dairy specialization. The freshness of their milk products in the New England and New York markets provides Vermonters one of their few remaining advantages over larger agricultural competitors to the west. Today, Vermont farmers have adopted a "superior quality" strategy in the marketing of their produce, creating a premium goods niche for the Green Mountain state. This thesis traces the evolution of farming in Vermont, from the days before European colonization of the New World to the rise of the dairy and premium goods "solution" in the twentieth century. It explores the ever-changing production of a variety of farm goods in Vermont, resulting in a seemingly inexhaustible search for a stable and sustainable Green Mountain niche.

**Eliza H. Reed**

*Advisor:* Joseph Hall

### **The Landscape of a Southern Woman's Life: The Construction of White Mistresses' Identities in the Slave Societies of South Carolina and the British West Indies, 1800-1840**

The lives of white women in the early nineteenth-century slave societies of the British West Indies and South Carolina were built on paradoxes: white women were dependent on slavery but tried to separate and insulate themselves from it. However, their very acts of attempted partition

and distinction were clear indicators of the significance and power of slavery in the lives of white women and in society. White women lived in a world that was separated from the work of black women even though the work of black women was basis of the white women's world. The divisions of gender and race created dichotomies that elevated white women beyond the power dynamics of the slave system controlled by white men. Despite their apparent separation from it, white women were deeply intertwined and connected to the slave system, as reflected through social customs and behaviors, particularly in regard to labor, society, and sexuality. Slavery structured an entire society in the need to maintain control, a fact that is most apparent when looking at the interactions and relationships that were not supposed to exist.

**Lauren E. Tempest**

*Advisor:* Michael E. Jones

**Mine Eyes Desire You above All Things: A Methodological Examination of Causality and Meaning behind the Annulment of a Royal Marriage**

Fierce historical debate has long argued over the instigating forces behind the sixteenth-century dissolution of King Henry VIII's marriage to his first wife, Catherine of Aragon, a pivotal event that led to the English Reformation and fundamentally changed the nature of British monarchy. The annulment was indisputably a convergence of many forces—within England, in international circles, and through the reaction and desires of individuals—but the historian's construction of this "past-as-history" has often been narrowly subjective and unreliable, relying too heavily on a single historiographical approach and subsequently biased identifications of causality. Over time, the dominant historiography has changed, but the primary approaches—religious history, the traditional source-based investigation, and the gendered concerns within postmodernism—have left an indelible, though occasionally fictional, impression upon our understanding of the event. I contend that a more balanced and inclusive explanation requires a multifaceted examination of several methodologies. My study shows that the use of multiple historiographical interpretations identifies a wider range of influential structures and forces, and a comparison of their causal rationalizations yields a more thoughtful and comprehensive final explanation to truly address the realities of this complex event, rather than the singular unjustified explanation of an unlucky queen at the mercy of a tyrannical king.

## Interdisciplinary Studies

**Meaghan A. Creedon**

*Advisor:* Georgia Nigro

### **Understanding Identity Development: Agency and Individualization in Narratives of Emerging Adults**

This study examined the identity development of emerging adults using two different approaches. Emerging adulthood is a developmental stage between ages 18 and 25 during which individuals explore their identities and roles in society. Many emerging adults in Western industrialized societies are largely untethered from the responsibilities typically associated with adulthood, such as marriage, parenting, and full-time work. They spend these years experimenting with different identities, exploring academic and career interests, developing relationships, traveling, and gaining life experiences. Theorists increasingly recognize emerging adulthood as the time during which the majority of identity work occurs. According to some theorists, identity development is made more difficult by the diminished availability of social and institutional support. For this reason, theorists propose that to successfully develop an identity, individuals must possess agency or a sense of drive, responsibility, and control over one's life course. In this study, I measured agency in emerging adults at Bates and other American universities through two measures. Participants responded to a questionnaire that measured agency and wrote a turning point story that was later coded for elements of agency. This study provides information on the links between agency and identity formation in emerging adults.

## Mathematics

**Emmanuel F. Drabo**

*Advisor:* Meredith L. Greer

### **Epidemiological Impact of ART in Burkina Faso, South Africa, and Uganda**

The death toll and the economic costs due to the human immunodeficiency virus (HIV) have climbed since the virus' first appearance in the early 1980s. Sub-Saharan Africa remains the worst-affected region, with 63% of the world's HIV infection cases, and 72% of all AIDS deaths. Widespread access to antiretroviral therapy (ART) could help reverse this trend, because

ART offers extended longevity benefits and reduces patients' infectiousness. Paradoxically, these life-prolonging effects could increase HIV/AIDS prevalence. Moreover, noncompliance with ART and the spread of ART resistance might further the epidemic's expansion, thereby mounting the costs of effectively combating it. This paradoxical effect of ART on the HIV/AIDS epidemic makes the allocation of health budgets for HIV/AIDS programs a challenging task for many countries.

This research uses a five-compartment deterministic model to gauge the epidemiological impact of ART in urban areas of Burkina Faso, South Africa, and Uganda over the next decades. We determine the basic reproduction number,  $R_0$ , using the next generation approach. In addition, we use optimal control theory to estimate the optimal allocation of HIV/AIDS treatment over the next decades. Finally, we use simulation results to suggest country-specific public health policies that might help contain the epidemic.

## Neuroscience

**Jared J. Cassin**

*Advisor:* John E. Kelsey

### **The Opioid Receptor Antagonist, Naltrexone, and the Kappa Receptor Agonist, U50,488, Reduce L-DOPA-Induced Dyskinesia in an Animal Model of Parkinson's Disease**

While levodopa (L-DOPA) is currently the most effective therapy for Parkinson's disease (PD), it is also associated with the development of L-DOPA-induced dyskinesia (LID), a debilitating side effect that appears in up to 80% of PD patients within 5 years of L-DOPA treatment. Because endogenous opioids, particularly dynorphin, upregulate in response to L-DOPA in striatal output neurons underlying PD, much research has focused on the role of endogenous opioids in PD and LID. I chose to investigate the effects of the nonspecific opioid receptor antagonist, naltrexone (1, 4, and 10 mg/kg), and the specific kappa opioid receptor antagonist, nor-BNI (20 mg/kg), on both the therapeutic (antiparkinsonian) effect of L-DOPA and LID using the 6-OHDA rat model of PD. Thus far, naltrexone has dose-dependently enhanced the therapeutic effect of 35 mg/kg L-DOPA on forepaw stepping, but has not affected LID. The results of this study will help facilitate our understanding of the role of endogenous opioids in PD and LID, and may contribute to the development of new therapeutic and/or antidyskinetic drugs.

**Kathryn C. Schierberl**

*Advisor: John E. Kelsey*

### **The Opiate Kappa Receptor Antagonist, nor-BNI, Reduces the Aversiveness of Opiate Withdrawal in Rats**

Dynorphin, an endogenous opiate, has been implicated in the anti-rewarding effects of repeated administration of various drugs of addiction and therefore is expected to enhance the aversiveness of opiate withdrawal. Given that the effects of dynorphin are due to its selective binding to kappa-opioid receptors, I tested this hypothesis by examining the effects of nor-BNI, a selective kappa-receptor antagonist, on the symptoms of opiate withdrawal and the aversiveness of opiate withdrawal using a conditioned place aversion paradigm. Morphine dependence was induced in rats by escalating twice per day injections, over the course of 5.5 days, concluding with a dose of 50 mg/kg. On the afternoon of day 6 rats were injected with either saline or nor-BNI 5 hr prior to 4 mg/kg naltrexone-precipitated withdrawal. In order to assess the effects of nor-BNI on withdrawal, classic withdrawal symptoms were recorded and a conditioned place aversion paradigm was employed to measure the aversiveness of withdrawal symptoms. Consistent with this hypothesis, I found that nor-BNI given prior to opiate withdrawal reduces some of the symptoms as well as the aversive motivational effects, indicating that dynorphin secretion likely mediates both of these effects.

## **Philosophy**

**Simon B. Griesbach**

*Advisor: Mark Okrent*

### **Stop and Smell the Roses: An Examination of Olfaction and its Objects**

Most philosophical examinations of sensation or perception focus on vision. While serving as the paradigmatic sense modality, vision shares few similarities with the other senses. In particular, the physical binding of smells to olfactory receptors suggests a direct connection between stimulus and perceiver not present in vision. Scientific theory upholds this suggestion, defining olfaction as the conversion of chemical energy at the nose into electrical signals that provide an organism with meaningful information about its surroundings. These scientific analyses raise questions about the real nature of smells and about the manner in which we process olfactory sensations. What is the importance of experience in smell perception? Is



there an olfactory field in the same sense as the visual field? If so, what is it like? How do people form beliefs about the world based on smells? In this thesis, I examine the sense of smell and define its place within the senses by exploring the nature of smells, the interface between this sense and the other senses, and the significance of experience to olfaction and perhaps sensation overall.

**Kathryn A. Mann**

*Advisor:* Mark Okrent

### **Searching out Description: A Philosophical Ruminaton on the Films of Ingmar Bergman**

Many theories of film, whether implicitly or explicitly, attempt to elucidate an answer to this question: "What is film?" Most thinkers who approach this question carry presuppositions with which I disagree: 1) the assumption that a singular and unified theory of film is possible 2) given the former, that it is sufficient, and 3) that it is *the* appropriate question we should be asking as we philosophize film. I argue that this project is misguided in its conception. In light of this, I suggest an alternative approach to understanding film and the way its interpretation functions. My thesis contends that, in order to appreciate film, we must shift our attention away from the idea that its philosophy can be contained by a single theory, *toward* individual films themselves. Each film is capable of offering its own valuation for the questions I find more interesting and more relevant than, "What is film?" Individual films are capable of answering these questions: "Why are films meaningful to us? Why must we make films?" Through an in-depth investigation of the films of Swedish filmmaker, Ingmar Bergman, I articulate answers to those questions, and thereby re-formulate our theoretical approaches to film aesthetics.

**Anna C. Stockwell**

*Advisor:* Casey O'Callaghan

### **Beauty, Experience, and Morality**

In the philosophy of aesthetics, attempts have been made to define an objective standard for judging beauty. This cannot be done because the objects judged as beautiful always vary subjectively. However, I believe that there is a universal kind of experience in which judgments of beauty are made, and in light of this I propose a new way of defining beauty as a quality that occurs in the relationship between an object and a perceiver who has a

beauty-experience. First, I look at traditional definitions of the word “beauty” and explain and defend my new definition. Then I discuss the nature of the beauty-experience, a necessary relata for beauty, containing desire and awe, and resulting in unselfing and a judgment of beauty. Finally, I discuss how these elements of the beauty-experience, and the concept of beauty can be of value. Awe leads to unselfing and results in a change in consciousness and places the object of beauty at an objective level so that it may be valued independently from the self. The desire sparked by beauty motivates us to pursue it with unselfish care and concern.

## Physics

**Zachary J. Lapin**

*Advisor:* Hong Lin

### **Polarization Dynamics in a Multi-Transverse-Mode Vertical-Cavity Surface-Emitting Laser (VCSEL) Subject to Optical Feedback**

We have studied experimentally the polarization dynamics in the multi-transverse-mode regime of a vertical-cavity surface-emitting laser (VCSEL) under isotropic optical feedback. Orthogonally polarized states of the total power of the VCSEL manifest antiphase dynamics. Spatially resolved measurements indicate that the antiphase dynamics are governed by the fundamental mode. For each polarized state, different transverse modes show synchronized fluctuations at a time scale ranging from 0.01 to 0.1  $\mu\text{s}$ , but do not have a fixed correlation for fluctuations in the nanosecond range. Research continues in both the single- and multi-transverse-mode regimes while the VCSEL is subject to polarization selective feedback. With polarization selective feedback we can control which polarization is dominant. We have observed low frequency fluctuations (LFF) in both the single and multiple transverse mode regimes, which were not observed with isotropic feedback.

## Political Science

**Beth D. Brown**

*Advisor:* Áslaug Ásgeirsdóttir

### **The Fading Hegemon: An Exploration of U.S. Hegemonic Influence on Treaty Success**

In the post-World War II era, the United States has been considered the world's hegemon, the dominant power in the international community. Yet, over the past two decades, political scientists have begun to question the status of U.S. hegemony, asserting that its power is diminishing. This calls into question the ability of the United States to influence outcomes in the international arena. Through this thesis, I examine if the United States has the power to convince other states to align their decisions about treaty ratification and compliance with its own, ultimately developing a better understanding of whether or not the United States, as the hegemon, can impact the success of environmental treaties. I focus on the United States' soft power – its power sources outside of military strength – to see if the United States can successfully employ them as persuasive mechanisms. Sufficient research has not been dedicated to soft power and its impact, making this a significant gap in political scholarly literature and therefore worth exploring. I first look at hegemonic stability theory, soft power theory, and their relationships with the United States. I then examine their significance within the context of two case studies: the International Whaling Commission and the United Nations Convention on the Law of the Sea. I ultimately assert that the United States' soft power is insufficient to influence the actions of other states, and thus the success level of treaties.

**Besir Ceka**

*Advisor:* James Richter

### **The EU and Minority Rights in Eastern Europe: The Case of Estonia and Romania**

In my thesis I draw on theoretical work in economics and politics in an attempt to understand ethnic conflict and European Union (EU) influence in Eastern Europe. Using Waever's theory of desecuritization and Kymlicka's theory of multiculturalism, I examine how the EU enlargement process has affected the discourse on minority rights in Romania and Estonia. I argue that in the early 1990s the ruling elites of these two post-communist countries securitized the discourse on minority rights by evoking an

existential threat to the nation posed by demands for such rights. This discourse, in turn, closed many normal political channels, such as party negotiations between minority and majority, for solving the conflicts in these countries. I then argue that the prospects of joining the EU, with one membership conditionality being respect for minority rights, changed the majority party incentives. Those parties that articulated a more multicultural and inclusive understanding of the nation started winning more votes. This trend led to the desecuritization of minority rights discourse, which then facilitated constitutional changes and other normal political solutions to advance minority rights.

**Elizabeth J. Murphy**

*Advisor:* Melinda Plastas

### **Race or Gender: Re-examining Political Participation in the United States through Intersectional Discourse and Latina Political Identity**

When assessing political participation in the United States, the question of “who participates?” is almost exclusively explained in terms of either race or gender. By reducing political participants to this either/or categorization, the experience of Latinas and other women of color is made invisible. This study re-examines the means by which political participation is analyzed by using the analytical framework of intersectionality. Intersectionality enables us to study the participation of Latinas inclusive of the complexities of race, gender, class, language, nationality, and immigration status. How does the use of an intersectional framework change our understanding of political participation in general, and specifically in the case of Latinas? I begin by developing a definition of political participation that encompasses a wide range of activities, followed by a discussion of intersectional discourse. With this foundation, I examine Latina voting in the 2000 presidential election and compare it to Latina involvement in the immigration reform protests and demonstrations of 2006. In shifting the paradigm of participation from an either/or race/gender categorization and making visible the experience of Latinas, I argue that we gain a more complex understanding of who participates and how. As a result, a new more inclusive analysis of political involvement in the United States can begin to be developed.

**Kathryn A. Nickerson**

*Advisor: Áslaug Ásgeirsdóttir*

**Devising a Sustainable Fisheries Management Model: A Policy Analysis of the American Lobster and Atlantic Cod Fisheries in the Gulf of Maine**

Since the adoption of the Magnuson-Stevens Fishery Conservation and Management Act in 1976, the total commercial landings of American lobster in the Gulf of Maine have exhibited steady growth while Atlantic cod landings have experienced a marked decline. I offer a comprehensive investigation of the competing approaches to sustainable management in these two fisheries. I review government policies on the local, state, and federal level and common fisheries management schemes such as limited entry, time and area restrictions, quotas, capital and economic constraints, and co-management. While the lobster industry utilizes a management model that emphasizes user-based co-management, the current model of cod management places emphasis on the role of the federal government in managing the resource. This thesis seeks to apply the features of successful lobster management to the cod fishery. In promoting sustainability, I recommend the use of bottom-up, user-group-centered management practices coupled with minimal yet sufficient government involvement.

**Psychology**

**Rae E. Bacharach**

*Advisor: Susan Langdon*

**Coping Strategies Relate to Quality of Life in Patients with Inflammatory Bowel Disease**

Inflammatory bowel disease (IBD) is a chronic gastroenterological disease with no known cause or cure. Previous research has shown a correlation between coping strategies and quality of life in a wide variety of chronic diseases, but little work has looked systematically at the variety and effectiveness of coping strategies used by people with IBD. The present study takes a comprehensive look at how people cope with this condition, the relationship between their coping strategies and quality of life, and the effect of demographic characteristics on this relationship. An online questionnaire, completed by 78 individuals with IBD, revealed that participants use a wide variety of coping strategies, primarily those that they appraise as effective. Infrequent use of avoidant/emotion-focused coping strategies (e.g., denial)

and moderate use of approach/problem-focused coping strategies (e.g., future planning) were correlated with higher ratings of quality of life. Qualitative data were collected through in-depth telephone interviews with an additional select sample and revealed interesting themes that further illuminated the qualitative results. This study suggests that healthcare providers should advise their patients on appropriate strategies for coping with IBD.

**Emily E. Howard**

*Advisor:* Georgia Nigro

### **Using Mirrors and Social Stories to Help a Child with Autism Make Socially Appropriate Facial Expressions**

In this service-learning thesis, I worked with an eight-year-old boy with classic autism at the Margaret Murphy Center for Children (MMCC) in Lewiston, Maine. Individuals with autism are capable of identifying and labeling emotion in others, but often make facial expressions that are incongruent with the social context they are in. In this project, I helped a child with autism learn how to make socially appropriate facial expressions. Two sets of photographs, one of the participant's ability to make an expression on command and another of the participant's ability to make socially appropriate faces when shown pictures of certain contexts, were taken at three times: baseline, mirror intervention, and social story intervention. In order to teach the participant how to make recognizable faces, I used a mirror to appeal to his visual skills and foster his joint attention and imitation skills. In order to help the participant learn how to use these expressions appropriately, I created a series of social stories, presented as "books on tape." The photographs were analyzed by MMCC staff for improvement. I discuss these results in light of research on emotional recognition, the use of social stories, and other aspects of cognitive development in autism.

**Leah M. Roberts**

*Advisor:* Georgia Nigro

### **The Experiences of Pregnancy and Childbirth in the United States for Immigrant Latinas**

Research suggests that language barriers can dramatically impede health care; however, little of this research has focused specifically on how linguistic and cultural communication affects obstetric care. This study seeks to identify and describe the birthing and pregnancy experiences of immigrant

and limited English proficient (LEP) Latinas in the United States. Through qualitative analysis of face-to-face interviews, I closely investigate how communication during pregnancy and childbirth is perceived and how it might affect these women's experiences. Specifically, I explore how communication, language ability, and interpretation services influence immigrant and LEP Latinas' experiences of pregnancy and childbirth. In addition to the perspectives of Latina immigrant women, the current study also incorporates the perspectives of health care professionals and Spanish/English interpreters who work with immigrant or LEP Latinas during pregnancy and delivery.

**Jonthan P. Stange**

*Advisor:* Michael Sargent

### **Perception of One's Future and Past: Predictors and Moderators**

Past research has shown that the ease with which people can recall examples of certain events or characteristics can affect their self-descriptions. For example, participants who were able to easily list instances of their past assertive behavior rated themselves as more assertive than people who had difficulty recalling such instances, even if they listed more examples of their assertive behavior. This study examined the effect of ease of retrieval on individuals' self-perceptions of the future and of the past. Study 1 evaluated the effect of ease of retrieval of reasons why one would make a good employee after graduating on students' perceptions of their future. Study 2 assessed the relationship between ease of retrieval of childhood memories on self-reported memory quality. Exploratory analyses were conducted to evaluate the potential moderating effects of measures of cognitive style, such as need for cognition and attributional complexity.

**Alix M. Zamansky**

*Advisor:* Krista Scottham

### **Looking at Sexual-Minority Youth through a New Lens: Using Photovoice to Examine Resilience**

In collaboration with Outright Lewiston-Auburn and Proud Rainbow Youth of Southern Maine (PRYSM), this study explored resilience among gay, lesbian, bisexual, transgendered, questioning, and queer (GLBTQ) identified youth through a grassroots research method called photovoice. More specifically, participants were given cameras and asked to take pictures of their lives and come together for group discussions. A combination of content

analysis and grounded theory were used to analyze the subject matter of the photographs. Strong social support systems, including participation in the GLBTQ community, were found to be particularly important for the youth who participated in this study. These findings suggest that youth organizations such as Outright and PRYSM, as well as, gay-straight alliances in high schools, are integral aspects of the lives of GLBTQ-identified youth.

## Romance Languages and Literature

### French

Caitlin J. deWilde

Advisor: Kirk Read

#### Une Formation Immigrée: Trois Protagonistes en Quête D'Identité

My thesis is an exploration of literary works that treat immigrant's *formation* within the context of postcolonial francophone Vietnam, Cameroun, and Algeria. The untranslatable French word *formation* connotes both a formal education and a nuanced, psychological development. After a brief examination of the historical context within each culture, I study formational influences on each narrator's identity using specific textual examples: Kim Lefèvre's *Métisse blanche* and *Retour à la saison des pluies*, Calixthe Beyala's *Maman a un amant*, and Malika Mokkedem's *Des rêves et des assassins*. Within each novel, I study immigrant *formation* in the traditional pedagogical sense of the word and in terms of the sentimental and emotional development of each narrator. I investigate how each immigrant navigates the complexities of his or her identity bound by specific cultural constraints, noting that identity *formation* is more problematic than a concrete delineation between the influences of two cultures. My approach to understanding immigrant *formation* highlights the stigma and difficulties attached to comprehending and shaping one's identity. I analyze the ever-changing nature of the *formation* and *re-formation* of the immigrant identity based upon the immigrant's acceptance, rejection, denial, and reconciliation of apparent and subtle influences.



## Sociology

**Dionne L. Akiyama**

*Advisor:* Heidi Chirayath

### **“Enter the Young”: The Importance of Empowerment for Youth Consumers of Mental Health Services**

The mental health system is witnessing a paradigm shift that increasingly acknowledges the important contributions provided by consumers of mental health services. However, the expansion of this philosophy is limited in its consideration of the perspectives of youth consumers. This thesis explores the youth empowerment strategies employed by a community-based organization that engages local youth, family, and service providers in a “systems of care” approach to mental health. I address the advantages, challenges, and outcomes of consumer empowerment initiatives in Lewiston at the individual and institutional levels, as well as the efficacy and value of the youth model as a whole. At the individual level, I investigate youth perceptions of their own empowerment through a combination of focus groups, personal interviews, and informal conversations with individuals involved at multiple levels of mental health services. Furthermore, I analyze organizational literature and field notes taken during governing council and committee meetings to assess the extent to which empowered youth consumers are able to impact and ultimately improve the delivery of mental health services within youth-serving agencies.

**Lauren A. Pluchino**

*Advisor:* Emily Kane

### **Where Did All the Girls Go? Informal Education as a Preventative Measure Against the Food-for-Sex Trade in Mwanza, Tanzania**

According to UNICEF, there are approximately 5,000 street children in Tanzania. While many of these “children of the street” are victims of HIV/AIDS, others are escaping domestic abuse. Many authors suggest that for street girls specifically, prostitution and the food-for-sex trade are prevalent survival tools. Moreover, many of these girls are not enrolled in primary or secondary school and are either unemployed or lack the financial support to start their own enterprises. Thus the act of bartering one’s body for food becomes a source of social capital, as the girls come to identify themselves as being part of a seemingly “legitimized” trade. My research utilizes case study analysis and qualitative interviews to explore how

informal education can be used as a social empowerment tool for street girls. Analyzing information from street children's organizations in Tanzania, such as FONEISCO, Hisani, and Tujifunze, provides insights on the linkages between social capital, informal education, and reduced sexual assault. Interviews with the directors of organizations further provide a first-hand perspective on issues affecting street girls.

## Theater and Rhetoric

### Theater

**Samuel G. Leichter**

*Advisor:* Martin Andrucki

#### **The Duke of Dark Corners: Performing the Role of Duke Vincentio in William Shakespeare's *Measure for Measure***

*Measure for Measure* is one of Shakespeare's problem plays. These works are given this label because of their complicated plots and their lack of a clear or unambiguous moral voice. Their endings often leave the reader more perplexed than satisfied. The characters in these plays have unclear objectives and obstacles. This is certainly true of Duke Vincentio. The Duke is problematic because in his character, virtue and fault are blurred, creating a state of moral indeterminacy that prevents him from ever approaching greatness. In performing the role of Duke Vincentio, an actor must explore and understand his vices. These flaws include his inability to govern, his voyeuristic tendencies, his seemingly pointless or cruel manipulation of those around him, his burning contempt for Angelo and finally, his decision to give mercy to everyone – even the most conspicuously undeserving – at the play's end. The challenge for an actor playing this role is to justify all of these complicated actions. A clear comprehension and connection with these four peculiarities of the Duke leads to the richest possible performance of this character, and illuminates this problematic play.

## Rhetoric

**Geoffrey C. Abbott**

*Advisor:* Stephanie Kelley-Romano

### **The Reinforcing Downward Spiral: The Mass Media's Influence on George W. Bush's Approval Ratings**

In the aftermath of the September 11, 2001, terrorist attacks, President George W. Bush's approval ratings climbed to a level not previously seen in the history of the American presidency. The mass media took note of this and, though being largely laudatory of the President for his handling of the attacks, framed the coming fall in approval ratings as inevitable. Agenda setting is generally considered to be the process by which the media affects the salience of an issue. Framing and priming deal with the manner in which the media covers an issue to ultimately influence how the general public thinks. Though there have been many failures of the Bush presidency, the American public does not appear to be responding objectively to current events. Rather, the increasingly negative tone with which the media covers the President and his approval ratings seems to have made the plunge in popularity a self-fulfilling prophecy. Using widely-accepted theories of media influence and data about the negative content in print media articles about approval ratings, I examine how the media raised awareness about Bush's approval ratings and how they contributed to the decline.

**Marisela A. Fermin**

*Advisor:* Charles Nero

### **They Believed: Rhetoric and the Fantasy of the eFrontier**

This thesis explores the rhetoric of the New Economy contextualized within the scope of two Internet companies: Webvan and eToys. The focus is a language-centered analysis of business-oriented publications and television broadcasting. I argue that improper and overly simplified metaphors are used to describe market events and create speculative hype to feed false investor confidence. Metaphor is analyzed as a rhetorical strategy for the propagation of paradoxical worldviews. Specifically, I analyze the ways in which metaphors of desire work to elicit an irrational hunger and insatiable attraction to pre-IPO start-ups like Webvan and eToys. Ambiguity as a rhetorical strategy (or polysemy) is also analyzed. I examine how polysemy is used as an effective means for diminishing the threat of competitors, and

finessing a positive spin on negative future profits for Webvan and eToys in their post-IPO phase.

**Breana P. Milldrum**

*Advisor:* Sterphanie Kelley-Romano

**The Doped-up Doctor Saved My Life: Reflections of Addiction and Health in *House MD***

Television medical dramas have been operating for over fifty years and have undergone rhetorically significant narrative evolutions (Davin 2003). Just as with earlier representations of police officers and lawyers, the move to humanize doctors through the medical drama has become very apparent. In this thesis, I investigate the popular medical drama *House MD*, which focuses on the diagnostic gifts of Gregory House, a doctor with a prickly personality and an addiction to prescription pills. Using G.S. Cape's (2003) work on myths and stereotypes of addiction within media, I examine *House MD* with an eye to the construction of doctor as "tragic hero." Furthermore, I argue that *House MD* — and the representation of Dr. House — complicates normalizing judgments of "doctor," the meaning and treatment of addiction, and the popular "healthy living" campaign such that the show acts as a mirror presenting to the audience shifting contemporary American notions of health and addiction.