



Conference Schedule Saturday April 18, 2009

Please see abstract section of this program for abstracts of presentations. All project titles and abstracts are printed as received.

Poster Session: 10:30 – 11:30

Lecture Center Hallway (by LC 30 and LC 31)

Daniel daCosta ≠

"5 α -Reductase Inhibitors Successfully Decrease Prostate Proliferations, However They Produce Anxiety-Like Behavior, and Decrements in Spatial Cognition."

Erin Duffy ≠

"An Examination of the Self-Control Strength Model and its Application to Gambling."

Karime Gazdik * *

"White-Tailed Deer Management at the Ancient Maya City of Mayapan: An Osteometric Perspective."

Naa Adoley Moeley Pappoe

"The Role of Deviant Peer Associations and Self-Esteem on Delinquency in African American Youth."

Joshua Quinn

"Stage Managing *Antigone*: An Educational and Professional Learning Experience."

Tammy Rockenstyre ≠

"Personality Traits as Predictors of Counterproductive Behaviors in College Students."

Deborah. J. Sheehan ≠

"Social Competence as a Protective Factor against Risk and Depression in African American Adolescents."

Provost's Welcome: 11:30 – 11:45

Lecture Center Hallway (by LC 30 and LC 31)

Session I: 12:00 – 01:15

LC 11: Presentations

Moderator: Daniel daCosta

Danielle Bellamy

"Risk and Problem Behaviors in African American Adolescents: Competence, Ethnic Identity, and Self-Esteem as Protective Factors."

Amy Kohtz ≠

"Sex differences, and endogenous hormonal milieu, interact with dose-dependent cocaine administration for effects on psychomotor, anxiety-like, and sexual behavior."

Danielle K. LaRaia ≠

"Parental Emotion-Focused and Problem-Focused Coping Responses as Predictors of Children's Distress During an Invasive Medical Procedure."

Session II: 12:30 – 1:45

LC 12 : Presentations

Moderator: TBA

Elise Bellefeuille

"The Gender of Money."

Joseph Boskovski

"The Paradox of Felon Disenfranchisement."

Satomi Kamimura

"Turn-Taking in Japanese and Anglo-American English Conversation: A Comparative Study in Interaction."

Concurrent Sessions: III & IV

Session III: 1:30 – 2:45

LC 11 : Presentations

Moderator: Amy Kohtz

Eric Horvitz ≠

"How Do We Age and Negative Emotional State Affect Memory?"

Benjamin Spear

"Bits and Bytes on the Front Lines: An Examination of Distributed Denial of Service Attacks as a Terrorist and/or State-Based Threat."

Session IV: 1:30 – 2:45

LC 13 : Presentations

Moderator: Danielle K. LaRaia

Kenneth Dawes

"Lost in Obscurity: Exploring Depression and the Reader through *Jude the Obscure*."

Kathryn Gulfo ≠

"Insights into the ROCK-mediated pathway leading to branching morphogenesis in mouse SMG."

Daniel Leonard ≠

"Fibroblast Growth Factors 7 and 10 modulate mouse embryonic salivary gland development in a time dependant manner."

Session V: 2:00 – 3:15

LC 12: Presentations

Moderator: Joseph Boskovski

Marcelo Freddi Lotufo ≠

"Art, class struggle, and experience."

Brooke Seligson

"Learning our Gender."

Jessica Sweet

"The Narcissistic Mise-en-Abyme in "The Pillar of Salt"."

Refreshments available all day in LC 14

* * *Provost Awards Recipients*

≠ *Provost Awards Honorable Mention*



Conference Schedule Sunday April 19, 2009

Please see abstract section of this program for abstracts of presentations. All project titles and abstracts are printed as received.

Poster Session: 10:30 – 11:30

Lecture Center Hallway (by LC 30 and LC 31)

Jason Altman

"Developing FRET Reporters for Forces in DNA Kissing Triangles."

Andrew A. Bick

"Number Morphology in Tunisian Arabic."

Alexis Catherine Espinosa

"TELOMERASE MUTATIONS: An Introduction to Understanding Telomerase Malfunction and Bone Marrow Failure."

Matthew Lester

"On a Random Recurrence on the Integers mod p ."

Laura Mariconda * *

"The Role of the Par Complex in the Retinotectal Map of Zebrafish."

Lauren Parker

"Berber and Arabic in Contact: The Case of Tunisian Arabic."

Session I: 12:00 – 1:15

LC 11: Presentations

Moderator: Alexis Catherine Espinosa

Jason Behnke

"Inhibition of Bacterial Biofilm Formation by Naturally-Inspired Organic Compounds."

Evan Delgado ≠

"B52 Aptamer and B52 RBD1-RBD2 Domain Synthesis."

William F. Hynes ≠

"Development of a Direct Cell Printing Technology."

Session II: 12:30 - 1:45

LC 12 : Presentations

Moderator: Andrew A. Bick

Sarah Deaton

"Expression of RNA Binding Proteins during Optic Nerve Regeneration in adult *Xenopus laevis*."

William Lauro

"Fluorescence Study of Amyloid Fibrillation."

Alina Walcek

"Carbon Isotopes and their use as a Stratigraphic Marker in New York State."

Session III: 1:30 -2:45

LC 11 : Presentations

Moderator: Jason Behnke

Lior Huli ≠

"Process integration and synthesis of Single-walled Carbon NanoTube."

Joshua LaRose

"High Resolution Rutherford Backscattering Analysis of Nanoscale Thin Films."

Whitney Sperrazza

"Silencing the Female Narrative: Elements of Folklore in Shakespeare's *Macbeth*."

Session IV: 2:00 – 3:15

LC 12 : Presentations

Moderator: Alina Walcek

Charlene Bradt

"J.M. Coetzee and the Politics of Animality."

Jennifer Kowalski * *

"Being the Object and the "Other": The Women of Morrison's *Paradise* and Naylor's *Linden Hills*."

Kira Lansing

"Four Novels and their Metamorphosis into Film."

Refreshments available all day in LC 14

* * Provost Award Recipients

≠ Provost Awards Honorable Mention

Undergraduate Research at the University at Albany

Award and Funding Recipients, 2008-2009

More information about each project can be found in the abstracts section of this program.

Each year, the Provost of the University at Albany provides special recognition to the most outstanding research presented at the Undergraduate Research Conference.

Provost Awards Recipients:

Karime Gazdik, Anthropology. "White-Tailed Deer Management at the Ancient Maya City of Mayapan: An Osteometric Perspective." Faculty Mentor: Professor Marilyn Masson.

Jennifer Kowalski, English. "Being the Object and the "Other": The Women of Morrison's *Paradise* and Naylor's *Linden Hills*." Faculty Mentor: Professor Paul Stasi.

Laura Mariconda, Biology. "The Role of the Par Complex in the Retinotectal Map of Zebrafish." Faculty Mentor: Professor John Schmidt.

Provost Awards Honorable Mention:

Daniel daCosta, Biology. "5 α -Reductase Inhibitors Successfully Decrease Prostate Proliferations, However They Produce Anxiety-Like Behavior, and Decrements in Spatial Cognition." Faculty Mentor: Professor Cheryl Frye.

Evan Delgado, Biology. "B52 Aptamer and B52 RBD1-RBD2 Domain Synthesis." Faculty Mentor: Professor Carla Theimer.

Erin Duffy, Psychology. "An Examination of the Self-Control Strength Model and its Application to Gambling." Faculty Mentor: Professor Edelgard Wulfert.

Kathryn Gulfo, Biology. "Insights into the ROCK-mediated pathway leading to branching morphogenesis in mouse SMG." Faculty Mentor: Professor Melinda Larsen.

Eric Horvitz, Psychology. "How Do We Age and Negative Emotional State Affect Memory?" Faculty Mentor: Professor Jeanette Altarriba.

Lior Huli, Chemistry. "Process integration and synthesis of Single-walled Carbon NanoTube." Faculty Mentor: Professor Ji Ung Lee.

William F. Hynes, Biology. "Development of a Direct Cell Printing Technology." Faculty Mentor: Professor Nathaniel C. Cady.

Amy Koitz, Psychology. "Sex differences, and endogenous hormonal milieu, interact with dose-dependent cocaine

administration for effects on psychomotor, anxiety-like, and sexual behavior." Faculty Mentor: Professor Cheryl Frye.

Danielle K. LaRaia, Psychology. "Parental Emotion-Focused and Problem-Focused Coping Responses as Predictors of Children's Distress During an Invasive Medical Procedure." Faculty Mentor: Dr. Leslie Halpern.

Daniel Leonard, Biology. "Fibroblast Growth Factors 7 and 10 modulate mouse embryonic salivary gland development in a time dependant manner." Faculty Mentor: Professor Melinda Larsen.

Marcelo Freddi Lotufo, English. "Art, class struggle, and experience." Faculty Mentor: T. Ebert.

Tammy Rockenstyre, Psychology. "Personality Traits as Predictors of Counterproductive Behaviors in College Students." Faculty Mentor: Professor Marcus Crede.

Deborah. J. Sheehan, Psychology. "Social Competence as a Protective Factor against Risk and Depression in African American Adolescents." Faculty Mentor: Professor Hazel M. Prelow.

Presidential Award for Undergraduate Research Nominees:

Jason Altman, Biology. "Developing FRET Reporters for Forces in DNA Kissing Triangles." Nominated by Professor Pan T.X. Li.

Elise Bellefeuille, Sociology. "The Gender of Money." Nominated by Professor Christine Bose.

Joseph Boskovski, Public Policy. "The Paradox of Felon Disenfranchisement." Nominated by Professor Ryan King.

Charlene Bradt, English. "J.M. Coetzee and the Politics of Animality." Nominated by Professor Paul Stasi.

Sarah Deaton, Biology. "Expression of RNA Binding Proteins during Optic Nerve Regeneration in adult *Xenopus laevis*." Nominated by Professor Ben G. Szaro.

Erin Duffy, Psychology. "An Examination of the Self-Control Strength Model and its Application to Gambling." Nominated by Professor Edelgard Wulfert.

Karime Gazdik, Anthropology. "White-Tailed Deer Management at the Ancient Maya City of Mayapan: An Osteometric Perspective." Nominated by Professor Marilyn Masson.

Kathryn Gulfo, Biology. "Insights into the ROCK-mediated pathway leading to branching morphogenesis in mouse SMG." Nominated by Professor Melinda Larsen.

Eric Horvitz, Psychology. "How Do We Age and Negative Emotional State Affect Memory?" Nominated by Professor Jeanette Altarriba.

Amy Kohtz, Psychology. "Sex differences, and endogenous hormonal milieu, interact with dose-dependent cocaine administration for effects on psychomotor, anxiety-like, and sexual behavior." Nominated by Professor Cheryl Frye.

Jennifer Kowalski, English. "Being the Object and the "Other": The Women of Morrison's *Paradise* and Naylor's *Linden Hills*." Nominated by Professor Paul Stasi.

Daniel Leonard, Biology. "Fibroblast Growth Factors 7 and 10 modulate mouse embryonic salivary gland development in a time dependant manner." Nominated by Professor Melinda Larsen.

Brooke Seligson, Women's Studies and Communications. "Learning our Gender." Nominated by Professor Barbara Sutton.

Whitney Sperrazza, English. "Silencing the Female Narrative: Elements of Folklore in Shakespeare's *Macbeth*." Nominated by Professor Ineke Murakami.

Jessica Sweet, English. "The Narcissistic Mise-en-Abyme in "The Pillar of Salt"." Nominated by Professor Steve Weber.

Partial funding for the Undergraduate Research Conference is provided by the University Auxiliary Services.

Saturday April 18th, 2009

Abstracts – Arranged by Session and Room

Note: All project titles and abstracts are printed as received.

Poster Session

Lecture Center (by LC 30 and LC 31)

Daniel daCosta, "5 α -Reductase Inhibitors Successfully Decrease Prostate Proliferations, However They Produce Anxiety-Like Behavior, and Decrements in Spatial Cognition." Course Project, Biology. Project Advisor: Dr. Cheryl Frye.

Testosterone (T) can alter sexual, social, anxiety-like, and/or cognitive behavior of male rodents; however, whether these effects are due to actions of T, or its 5 α -reduced metabolites, is of interest, considering that this treatment will inhibit the formation of these metabolites. An experiment was performed to test the hypothesis that T's effects to these behaviors require formation of 5 α -reduced metabolites. 5 α -reductase inhibitors have been used as a treatment for benign prostate hyperplasia (BPH) as well as male pattern baldness. Gonadectomized (GDx) rats were implanted with silastic capsules containing T, finasteride (a 5 α -reductase inhibitor), T and finasteride, or nothing. Rats were tested in a standard mating paradigm, in tasks that are sensitive to anxiety-like (elevated plus maze, light-dark transition) or cognitive (water maze) behavior, and then we measured the weight of the rats' prostates. Rats administered finasteride had significantly smaller prostates, however they also tended to have longer latencies to ano-genital investigation, spent significantly less time in the white chamber of the light-dark transition task, and took significantly longer to find the hidden platform in the Morris water maze. Thus, finasteride produced decrements in social, anti-anxiety and/or cognitive behavior, suggesting an important role of 5 α -reduced metabolites in these functions.

Erin Duffy, "An Examination of the Self-Control Strength Model and its Application to Gambling." Senior Honors Thesis, Psychology. Thesis Advisor: Edelgard Wulfert, Ph.D.
Presidential Award for Undergraduate Research Nominee.

According to a self-control strength model, self-control exertion can undermine subsequent self-control performance. We tested the application of this model to gambling behavior. In experiment 1, we compared the betting strategies on a gambling game of two groups, one that exerted self-control on a previous task and one that did not. A performance contingent reward served to simulate realistic gambling behavior. We found no significant differences in gambling behavior between both groups. Previous research has shown with sufficient motivation individuals can overcome self-control depletion; therefore, our inability to find a significant difference may have been due to the performance contingent reward. In experiment 2, participants were told that they would be *automatically* eligible for a money prize. However, we failed to find significant differences in gambling behavior between both groups. Our inability to demonstrate the self-control strength model to gambling may be due to limitations inherent in the study.

Karime Gazdik, "White-Tailed Deer Management at the Ancient Maya City of Mayapan: An Osteometric Perspective." Study Abroad project. Project Advisor: Dr. Marilyn Masson.
Presidential Award for Undergraduate Research Nominee.

Analysis of faunal bones from the archaeological site of Mayapán, Yucatan, Mexico, provides evidence regarding animal management practices at this ancient city, the largest political center in the Maya area from A.D. 1200-1441. This study reconstructs the exploitation of white-tailed deer by documenting the size variation of skeletal elements of butchered animals for the purpose of obtaining accurate age-at-death information. Thus far, Mayapán's faunal assemblage is the only archaeological sample that provides evidence for white-tail deer husbandry that matches descriptions of Spanish chroniclers during the early Colonial Period (16th century) which detail the practices of taming, raising, and tethering deer. Deer are thought to have been a primary product raised in the city's houselots, these animals comprised a staple of the urban diet and meat, hide, and bone products were exported to other sites.

Naa Adoley Moeley Pappoe, "The Role of Deviant Peer Associations and Self-Esteem on Delinquency in African American Youth." Undergraduate Research Initiative project, Psychology. Project advisor: Dr. Hazel M. Prellow.

The aim of the present study was to examine the role of deviant peer associations and self-esteem on delinquency in a sample of 140 African American urban high school students between the ages of 13 and 19 years ($M = 16.41$, $S.D. = 0.977$). The guiding theoretical framework consisted of Kaplan's (1980) model of deviant behavior in the assessment of self-esteem and Sutherland's (1947) differential association theory. Correlational analyses revealed a significant positive relationship between delinquency and association with deviant peers ($p = 0.000$) and a significant negative relationship between delinquency and self-esteem ($p = 0.005$). Regression analyses conducted indicated association with deviant peers accounted for approximately 20% of the variance in delinquent behaviors ($R^2 = 0.201$) and self-esteem accounted for an additional 3.4% ($R^2 = 0.235$) over and above that of association with deviant peers. Theoretical implications of this study are discussed as well as study limitations and future directions.

Joshua Quinn, "Stage Managing *Antigone*: An Educational and Professional Learning Experience." Independent Study Project, Theatre. Project Advisor: Andi Lyons.

In March of 2009, the University at Albany's Department of Theatre produced a production of Brecht's *Antigone*, adapted from the original Sophocles play of the same name. The director's vision of this production included extensive use of multimedia, including video projections, live video, and music, as well as numerous light and fly cues. Additionally, there were massive doors that opened and closed on cue as part of the set. The purpose of my project is to present for review my prompt book, production book, and a paper that journals my experience from auditions through closing night. *Antigone's* production was an incredible learning experience that challenged me as a student, allowed me to grow as a stage manager, and forced me to evaluate the way I interact with people. While the process was difficult and stressful, I was able to succeed by remaining calm, organized, and professional.

Tammy Rockenstyre. "Personality Traits as Predictors of Counterproductive Behaviors in College Students." Senior Honors Thesis, Psychology. Thesis Advisor: Marcus Crede.

Student performance has been studied repeatedly using grade point average (GPA) and degree attainment as the main indicator of performance but other important components of student performance such as counterproductive behaviors have been less frequently studied. The current study examines the relationship between personality, SAT scores, and counterproductive behaviors within the academic environment. The sample consists of 276 students who were assessed on personality, SAT scores, GPA and behaviors using self-report measures. Self-control and substance abuse exhibited the strongest relationship. Data from hierarchical regression analysis also suggests some interesting finding, personality traits account for more unique variance in the outcome variables than did SAT scores and high school GPA.

Deborah. J. Sheehan, "Social Competence as a Protective Factor against Risk and Depression in African American Adolescents." Independent Study Project, Psychology. Project Advisor: Dr. Hazel M. Prelow.

Depression is an important topic to study because it affects almost everyone whether directly or indirectly. Depression represents a significant health problem for adolescents and often persists into adulthood. For example, approximately one in five children will experience depression before adulthood (Berk, 2006). While rates of depression are typically lower among African American adolescents than European American adolescents, the suicide rate among African Americans is steadily increasing. Moreover, suicide has been identified as the third leading cause of death among African American youth. The present study sought to examine the effects of various risks in relation to depressive symptoms, such as discrimination and ambient hazards in a sample of 129 inner-city African American youth, grades 9-12 ($M=11.09$, $SD=.760$) between the ages of 15 and 19 ($M= 16.41$, $SD= .977$). It was hypothesized that there would be a positive relationship between depressive symptoms and risk. It was also hypothesized that social competence would moderate the relationship between exposure to risk and depression. Findings from the present study both confirm and refute hypotheses. A Hierarchical regression analysis showed social competence emerged as a protective factor for depressive symptoms.

Session I

LC 11: Presentations

Danielle Bellamy, "Risk and Problem Behaviors in African American Adolescents: Competence, Ethnic Identity, and Self-Esteem as Protective Factors." Independent Study Project, Psychology. Project Advisor: Dr. Hazel M. Prelow.

African American adolescents in poor, urban settings are at an increased risk for experiencing risk factors such as poverty, bullying and teasing, and exposure to violence in their neighborhoods, which may increase negative interactions with peers and the environment. The purpose of this study was to examine the roles of social competence, ethnic identity, and self esteem on the relationship between environmental risk and problem behaviors in African American adolescents. Participants consisted of 141 African American high school students in grades 9-12 ($M=11.09$, $SD=.760$) between 15 and 19 years old ($M=16.41$, $SD=.977$). Ethnic identity, competence, and self-esteem were posited to moderate the relationship between environmental risk and problem behaviors, such that those African-American adolescents who have higher senses of ethnic identity, competence and self esteem will exhibit less problem behaviors, both independently and combined. Hierarchical regression analyses showed ethnic identity to be a protective factor with regards to problem behaviors, suggesting that ethnic identity may have an impact on the relationship between environmental risk and problem behaviors in African-American adolescents.

Amy Kohtz, "Sex differences, and endogenous hormonal milieu, interact with dose-dependent cocaine administration for effects on psychomotor, anxiety-like, and sexual behavior." Senior Thesis Project, Psychology. Thesis Advisor: Dr. Cheryl Frye.

Sex-dependent factors, such as hormones, may influence the experience of illicit drugs. With respect to cocaine, women, compared to men, tend to report less euphoria, more anxiety, stronger cue-induced cravings, and are more likely to relapse. In animal models, female rats are more sensitive to the psychoactive effects of cocaine, compared to males. Progesterone (P), in part through actions of its metabolite, 5 α -pregnan-3 α -ol-20-one (3 α , 5 α -THP), which mediates reproductive and anxiety behavior of rodents, may underlie some sex differences in response to cocaine. To investigate the role of progesterone in sex differences in response to cocaine, male and female rats in the high (proestrus) or low (diestrus) progesterone phase of the estrous cycle were administered cocaine (0, 5, 10, or 20mg/kg, IP) and observed for motor and anxiety behavior in the open-field and then mating behavior. We observed interactions between hormonal status and cocaine regimen in psychomotor, anxiety-like, and sexual behaviors. In particular, proestrous rats were more sensitive to the psychomotor, anxiety-enhancing and reproductive disturbances associated with cocaine. These findings suggest that sex and hormonal status can influence the experience of illicit drugs, such as cocaine.

Danielle K. LaRaia , "Parental Emotion-Focused and Problem-Focused Coping Responses as Predictors of Children's Distress During an Invasive Medical Procedure." Research Assistant, Psychology. Faculty Mentor: Dr. Leslie Halpern.

The objective of this research was to explore the relationship between parental emotion-focused and problem-focused reactions and child distress during a voiding cystourethrogram (VCUG), a fluoroscopic study of the urinary tract obtained via catheterization and known to cause intense distress in children. Specifically, it was hypothesized that children of parents who exhibit emotion-focused reactions and problem-focused reactions to their children's negative emotions in daily life would exhibit less distress during the VCUG. Currently, participants include 20 non-chronically ill children between 4 and 10 years old whose parents completed the Coping with Children's Negative Emotions Scale (Fabes et al., 1990) prior to the VCUG. Immediately following the VCUG, one parent and the medical staff member who administered the VCUG completed ratings of the child's anxiety, fear, pain, discomfort, and cooperation. Overall, the results show a negative relationship between parental emotion-focused reactions and child distress during an invasive medical procedure; however, parental problem-focused reactions were not linked to most variables of child distress. These findings suggest that parents and children may benefit from preparation programs which emphasize emotion-focused coping training strategies prior to invasive medical procedures.

Session II

LC 12: Presentations

Elise Bellefeuille, "The Gender of Money." Senior Honors Thesis, Sociology/Women's Studies. Thesis Advisor: Christine Bose. Presidential Award for Undergraduate Research Nominee.

This study takes a closer look at the spending, saving, and investing habits of this generation of college graduates. 50 SUNY Albany students were polled on their financial habits and then answered financial knowledge questions. Questions included topics such as credit card use, investments, savings accounts, checking accounts, and more. The purpose was to determine the overall financial literacy of college students today, but more specifically, to determine if there is a significant difference between men and women. This is a work in progress; results of the study are not yet available. It will be completed by May 1st.

Joseph Boskovski, "The Paradox of Felon Disenfranchisement." Course Project, Public Policy. Project Advisor: Professor Ryan King. Presidential Award for Undergraduate Research Nominee.

With the total population of current and former felons quadrupling over the previous forty years, a growing body of literature has devoted its energy to the impediments facing successful reintegration. Convicted felons are uniquely subjected to numerous penalties—from restrictions on student grants and employment, to the permanent revocation of voting rights. Voting restrictions, in particular, affect 5.3 million Americans—constituting a serious challenge to the restoration of a civic life. The author examines felon disenfranchisement laws' unique historical background, contemporary political ramifications, and potential harm to reintegration. Particular attention is paid to reintegration problems by measuring the impact of punitive felon disenfranchisement laws on future criminality. The author also discusses potential causal links between voting restrictions and recidivism, and concludes by discussing the logic of justifying aims of punishment as they pertain to felon disenfranchisement laws.

Satomi Kamimura, "Turn-Taking in Japanese and Anglo-American English Conversation: A Comparative Study in Interaction." Independent Study Project, Communication. Project Advisor: Professor B.J. Fehr.

This paper is a comparative study of turn-taking in Japanese and Anglo-American English conversation. The comparison is based on an examination of the Conversation Analytic literature focused on turn-taking in the two cultures. Conversation Analysis (CA) analyzes naturally occurring talk-in-interaction between two or more parties. The interactions are recorded (audio/video) and transcribed to preserve and make the details of the interaction accessible to the analyst and to potential readers of the analysis. CA focuses primarily on participants' understandings of one another's conduct. Taking turns by co-participants is a fundamental feature in any conversation. Sacks, Schegloff and Jefferson's (1974) model of turn-taking based on English language conversation applies to Japanese conversation in broad outline but differs in some of the details which could impact intercultural communication.

Session III

LC 11: Presentations

Eric Horvitz, "How Do We Age and Negative Emotional State Affect Memory?" Course Project, Psychology. Project Advisor: Jeanette Altarriba, Ph.D. Presidential Award for Undergraduate Research Nominee.

In this critical review, data are presented that relate to the question—how do age and negative emotional state affect memory? Various data sets are examined that appear to indicate that the elderly are more susceptible to decrements in memory than younger groups, particularly when processing material that is of a negative, emotional nature. Although the evidence points to this decrement and the greater emphasis on negative mood states as related to performance in the elderly, a closer examination of the research indicates that various confounding variables may make indicate the need to interpret the extant data with caution. Additionally, the current review focuses on the ways in which research in this area would benefit from an expansion of variables that promote a more balanced approach to the question at hand. Recommendations for future research in this field of study are also included within this paper.

Benjamin Spear, "Bits and Bytes on the Front Lines: An Examination of Distributed Denial of Service Attacks as a Terrorist and/or State-Based Threat." Senior Honors Thesis, Political Science. Thesis Advisor: Victor Asal.

Over the past several years there has been an increase in the number and size of distributed denial of service attacks (DDoS). These attacks have left the realm of glory seeking script kiddies and have begun to attract the attention of the military and intelligence communities. This research seeks to explore how state-based/sponsored groups and/or terrorist organizations have begun to use the Internet as a second front in warfare. With incidents such as Estonia and Georgia it is important to determine whether the use of these tactics come from government agencies or rather from online partisans acting in solidarity with their homeland and its government. This research goes back over the ten year history of DDoS and its evolution from a hacker tool to a weapon of war.

Session IV

LC 13: Presentations

Kenneth Dawes, "Lost in Obscurity: Exploring Depression and the Reader through *Jude the Obscure*." Course Project, English. Project Advisor: Jeffrey Berman.

In my piece, I will attempt to understand the role of depression in literature, and how it affects the reader's emotional well-being. Can dark literature cause clinical depression? What are the possible pit-falls of such poignant pieces? Is the author accountable for their novel's effect on the reader? These are just a few of the questions I will be addressing in my piece. I will be using Thomas Hardy's novel *Jude the Obscure* to support my claim. This question has been investigated in the field of social psychology but few literary critics have explored this most pervasive topic.

Kathryn Gulfo, "Insights into the ROCK-mediated pathway leading to branching morphogenesis in mouse SMG." Research Assistant to: Melinda Larsen, Ph.D. Presidential Award for Undergraduate Research Nominee.

The process of branching morphogenesis utilizes an intricate actin-dependent pathway to form clefts and buds in developing organs, such as salivary glands, lungs, and mammary glands. Branching occurs by cleft initiation and elongation within buds followed by duct formation. Our research investigates the mechanism by which branching morphogenesis occurs in mouse submandibular salivary glands (SMG). We hypothesized that inhibitors of Rho kinase (ROCK) would prevent branching. My research suggests that Rho kinase (ROCK) activates the regulatory light chain of non-muscle myosin II ATPase, enabling the contraction of cytoskeletal actin filaments, and thereby facilitating cleft elongation, since ROCK inhibitors prevent normal branching morphogenesis. In the presence of ROCK and myosin light chain inhibitors, very small buds form without ducts. Research in this area lays the groundwork for future clinical treatment of pathologies associated with organs that develop through branching morphogenesis.

Daniel Leonard, "Fibroblast Growth Factors 7 and 10 modulate mouse embryonic salivary gland development in a time dependant manner." Undergraduate Research Initiative Project, Biology. Project Advisor: Dr. Melinda Larsen. Presidential Award for Undergraduate Research Nominee.

Fibroblast growth factors (FGF) are extracellular proteins that bind to cell receptors and initiate a cascade of reactions within the cell. Particular FGF's initiate specific pathways that ultimately produce the unique branched structure of the salivary gland. Previous studies showed that FGF7 leads to increased epithelial budding whereas FGF10 is associated with duct elongation. We hypothesize that the time at which the salivary gland is exposed to particular FGF plays a role in the functionality and development of the gland. Our preliminary results show that the epithelial rudiments can form both buds and ducts when exposed to FGF7, and then switched to FGF10. Glands that start with FGF10 and then are switched to FGF7 form a more obvious ductal phenotype. These data support the hypothesis that the time and sequence of FGF exposure has an impact on the overall morphology of the gland.

Session V

LC 12: Presentations

Marcello Freddi Lotufo, "Art, class struggle, and experience." Course Project. Project Advisor: T. Ebert.

What Adorno and Horkheimer have called the "culture industry" has become so powerful in the global market that art now, more than ever before, has become a commodity in the circuits of exchange. The role of cultural critique, consequently, has also changed. Its task in the contemporary situation is to help develop a critical consciousness which is critical of the culture industry and is capable of understanding its connection to class relations. Art, I will argue, has the power to overcome the "reification" of consciousness and social relations, namely, when they assume, in Marx's words, "the fantastic form of a relation between things" (*Capital I*, p. 165) and enable people to grasp everyday life by "the root." In my paper, I will argue that critics such as Adorno, Marcuse, and Walter Benjamin have pointed to the way a new cultural critique can engage the emerging global world and new technologies in a social analysis of art that makes the aesthetic an agency for cultural transformation.

Brooke Seligson, "Learning our Gender." Course Project, Women's Studies. Project Advisor: Professor Barbara Sutton.
Presidential Award for Undergraduate Research Nominee.

As children, many of our ideas concerning what it means to be male or female are shaped by the media. Sitcoms, advertisements, movies and more are constantly enforcing the stereotypes of a "girly" girl or the "manly" man. Women are moms and housewives, men are domineering bread winners. This mold, however, is formed well before adult years. The toys and films that are marketed for children contribute to gender socialization. I will focus on two children's films—The Little Mermaid and Shrek—to analyze the representation of gender roles and identities in the media and to chart positive changes.

Jessica Sweet, "The Narcissistic Mise-en-Abyme in "The Pillar of Salt"." Independent Study Project, English. Project Advisor: Steve Weber.
Presidential Award for Undergraduate Research Nominee.

Identity, a common theme in literature, appears in Albert Memmi's semi-autobiographical novel The Pillar of Salt. Memmi's own struggle with his multi-faceted identity materializes in his character, Alex. In order to explain the significance of this search for identity, I drew upon other theorists – Derrida's mise-en-abyme, Lacan's mirror stage, and Freud's narcissism. My "narcissistic mise-en-abyme" allows a reader to explore the confines of identity within one's self and within the community while keeping in mind the complexities of embarking on this journey alone. This paper draws into question the origins of an individual's identity in semi-autobiographical literature and makes a larger claim about how a narcissistic mise-en-abyme applies to society in general.

Sunday April 19th, 2009

Abstracts – Arranged by Session and Room

Note: All project titles and abstracts are printed as received.

Poster Session

Lecture Center Hallway (by LC 30 and LC 31)

Jason Altman, "Developing FRET Reporters for Forces in DNA Kissing Triangles." Senior Thesis, Biology. Thesis Advisor: Pan T.X. Li Ph.D. Presidential Award for Undergraduate Research Nominee.

Kissing complexes are a basic type of DNA/RNA tertiary interaction in which base pairs form a stem-loop structure of nucleotides for each hairpin. A series of DNA molecules consisting of two hairpins were covalently linked by a single-stranded linker. The two hairpins contained partially complementary sequences and could potentially form an intramolecular kissing structure. The length of the single stranded linker was varied from 20 nucleotides to 35 and 45 nucleotides. The 5'- and 3'-ends of these DNAs were chemically modified with a pair of Cy5 and Cy3 fluorophores respectively. Fluorescence resonance energy transfer (FRET) efficiency of the fluorophore pair reflects the end-to-end distance of the single stranded linker. If the hairpins kiss the elastic linker is stretched and the molecule adopts a triangle shape; separating the fluorophores apart resulting in low FRET efficiency. Breaking of the kissing complex leads to the retraction of the linker and thereby high FRET efficiency. The FRET of the modified DNA molecules was measured over the temperature range of 0°C to 80°C. The DNAs with 35- and 45-nucleotide linkers appeared to form intramolecular kissing triangles; however the 20-nucleotide linker did not. These observations were consistent with the hypothesis that a linker with more nucleotides has less internal tension thereby imposing less constraint on the kissing interaction than one with less nucleotides.

Andrew A. Bick, "Number Morphology in Tunisian Arabic." Course Project, Linguistics. Project Advisor: Lotfi Sayahi, Ph.D.

There is little detailed knowledge about noun morphology in Arabic dialects as opposed to Modern Standard Arabic. In this paper, I have set out to describe the method in which one dialect, Tunisian Arabic, marks nouns for number. To do this, I elaborated a description of noun morphology in Modern Standard Arabic and I elicited plural forms of a set of words from a native speaker of Tunisian Arabic. I then analyzed the data and assessed how Tunisian Arabic diverges from Standard Arabic in marking the dual and plural forms. The results show that in the Tunisian dialect, nouns generally mark for number in a similar way as in Modern Standard Arabic although there is some divergence between the two, as well. These differences involve the loss of case morphology and reduction of the dual form. It can be concluded that the Tunisian dialect has moved away from a complex inflectional morphology to one that is of a simpler nature.

Alexis Catherine Espinosa, "TELOMERASE MUTATIONS: An Introduction to Understanding Telomerase Malfunction and Bone Marrow Failure." Undergraduate Research Initiative Project, Chemistry. Project Advisor: Dr. Carla Theimer.

Telomerase is the ribonucleoprotein complex responsible for the formation and maintenance of telomeres. Telomeres are the physical ends of chromosomes and are necessary due to incomplete DNA replication at chromosomal termini. Telomerase activity is directly associated with telomere length and over-expression of telomerase leads to cell immortality while under-expression leads to cell death. The diseases associated with telomerase are a variety of bone marrow failure syndromes including dyskeratosis congenita, aplastic anemia, and idiopathic pulmonary fibrosis as well as cancer. This project involves first creating a library of disease-associated mutations in our laboratory. This will be followed by extensive comparative thermodynamic and functional studies in order to better understand telomerase activity, pinpointing regions of telomerase associated with specific aspects of the telomerase mechanism. This translational research can provide a better understanding of these diseases and assist in future rational drug design.

Matthew Lester, "Random Processes of the form $X_{n+1} = a_n \cdot X_n + b_n \pmod{p}$ where a_n takes on different values, and b_n takes on the value 1." Senior Thesis, Mathematics. Thesis Advisor: Martin Hildebrand.

I was interested in exploring how long it would take for a random process to become almost uniform on the integers mod p. I used the variation distance, which is one way to obtain this measurement, and compared the results when a_n and b_n take on different values. I was also interested in exploring Fourier transformations to define an appropriate upper bound for the number of steps it would take for the random process to become almost uniform on the integers mod p. To examine these mathematical processes I used the program Maple.

Laura Mariconda, "The Role of the Par Complex in the Retinotectal Map of Zebrafish." Senior Honors Thesis, Biology. Thesis Advisor: Dr. John Schmidt.

Visual activity acts via NMDA receptors in order to refine developing retinotectal maps by shaping retinal arbors. In zebrafish larvae, each arbor forms synapses by adding and deleting many trial and error branches. Branches in retinotopic sites are stabilized and new branches are added, while distant branches are deleted. We hypothesize that each branch may reassemble the polarity complex before it grows out. The polarity complex, consisting of Par3, Par6, and aPKC, is selectively localized to the growth cones of axons, and is required for specification of the axon. A system for antisense suppression of either Par3 or Par6 in retinal ganglion cells was developed in order to test its effects on retinotectal arbors. The antisense suppression slows branch formation, and does not affect the overall size of the arbors. These changes in growth patterns indicate the polarity complex might need to be activated and reassembled for branch formation as predicted.

Lauren Parker, "Berber and Arabic in Contact: The Case of Tunisian Arabic." Course Project, Political Science. Project Advisor: Lotfi Sayahi, Ph.D.

My presentation will be on the influence of Berber on the Colloquial Arabic Dialect of Tunisia. Berber is an Afro-asiatic group of languages spoken in several countries in North Africa, including Tunisia. It predates the introduction of Arabic into North Africa and it continues to be spoken alongside Arabic mainly in Morocco, Algeria, and to a lesser degree in Tunisia. Influences have been carried between these languages throughout the many centuries they have been in contact and Arabic now contains many words from Berber. I will specifically present on lexical borrowing from Berber into Tunisian Arabic. I will focus first on the semantic fields of these loanwords and examine whether they concern agriculture, domestic life or other subjects. Then, I will analyze the phonological processes of adaptation to determine the changes that Berber loanwords suffered as they were Arabized.

Session I

LC 11: Presentations

Jason Behnke, "Inhibition of Bacterial Biofilm Formation by Naturally-Inspired Organic Compounds." Undergraduate Research Initiative Project, Chemistry. Project Advisor: Nathaniel Cady and Rabi Musah.

Many species of bacteria can attach to surfaces and form dense layers of cells and extracellular material, known as biofilms. Biofilms can cause persistent contamination and infections and present multiple problems for removal and remediation. The primary objective of this study is to identify naturally occurring, and naturally inspired compounds that can inhibit biofilm formation. All tests to date have shown the effectiveness of some organic compounds against formation of biofilms, with little to no effect on cell growth or propagation in solution. Experimentation is ongoing to elucidate the mechanism of action of these compounds. Due to structural similarities between these compounds and N-acyl homoserine lactone (autoinducer) compounds, the current hypothesis is that these compounds affect quorum sensing activity in *P. aeruginosa*.

Evan Delgado, "B52 Aptamer and B52 RBD1-RBD2 Domain Synthesis." Independent Study Project, Biology. Project Advisor: Dr. Carla Theimer.

Our research project will be dealing with compounds known as aptamers, specifically named B52-RNA aptamers. Our RNA aptamers will derive from the B52 protein and a specific RNA recognition motif that the protein recognizes on pre-spliced mRNAs. Our project will be focusing on three different sequences of RNA aptamer stem loops that bind in the same fashion to the B52 protein RRM. We will be using NMR and other such techniques to analyze why these two different sequences bind in the same manner to the protein and what changes occur in the protein as a result.

William F. Hynes, "Development of a Direct Cell Printing Technology." Independent Study Project, Biology. Project Advisor: Dr. Nathaniel C. Cady.

Well-controlled microenvironments are needed to effectively study inter-cellular signaling and communication. A novel "quill pen lithography" (QPL) tool has been developed to both print and bind both bacterial and mammalian cells onto solid surfaces in well-defined spatial arrays. Using this technology, cellular attachment to surfaces has been mediated through binding of cells to QPL-printed antibodies as well as through the direct printing of cells in an alginic acid (alginate) matrix. Cell survival after direct printing methods has demonstrated retained viability and propagation. Current work is focusing on the optimization of this technique to precisely control the number of cells deposited per spot and to control the total spot size. This technology is now being used to study bacterial and mammalian inter-cellular communication, which will lead to significant advances in the fundamental biological and biomedical fields, such as inhibition of bacterial biofilms and advanced 3D tissue culturing.

Session II

LC 12: Presentations

Sarah Deaton, "Expression of RNA Binding Proteins During Optic Nerve Regeneration in Adult *Xenopus laevis*." Independent Study Project, Biology. Faculty Mentor: Ben G. Szaro
Presidential Award for Undergraduate Research Nominee.

Xenopus laevis frogs have the ability to regenerate their optic nerve following traumatic injury. This ability is unique to frogs and other lower vertebrates as higher vertebrates lack the capacity to regenerate the central nervous system (CNS) axons. Neuronal intermediate filament (nIF) proteins make up the bulk of the axonal cytoskeleton in vertebrate axons. The expression of nIFs in *X. laevis* optic nerve (CNS) during development and regeneration is dynamic and subject to both transcriptional and translational control. nIF expression during development and regeneration share many similarities. Recently, RNA binding proteins have been identified that associate with the middle molecular weight neuronal intermediate filament (NF-M) mRNA to influence its expression level during development. One of these binding proteins is hnRNP K. The exact mechanism by which hnRNP K acts to influence nIF expression is unknown. Therefore, I am studying the levels of expression and cellular localization of hnRNP K in the retina during optic nerve regeneration. Because hnRNP K is essential for the nucleoplasmic export and translation of NF-M mRNA, I am testing the hypothesis that regenerating axons, while exporting and translating more NF-M, will have more hnRNP K in the nucleus than is normally there. In this study I have succeeded in detecting and localizing hnRNP K in normal retinal ganglion cells (RGC's) and in RGC's at different time points during optic nerve regeneration, further explaining its roles in nIF expression.

William Lauro, "Fluorescence Study of Amyloid Fibrillation." Undergraduate Research Initiative Project, Chemistry. Project Advisor: Professor Lednev.

Amyloid fibrils are a type of protein aggregation associated with neurological diseases and have been found in the organs of patients with Alzheimer's disease, Huntington disease, Parkinson's disease, and type II diabetes. A wide range of proteins can form amyloid fibrils that are extraordinarily stable. Because of their stability harsh conditions such as high levels of alkalinity were believed to be the only means through which amyloid fibrils can be broken down. However, our research group has observed that fibrils formed from the mammalian whey protein apo-alpha-lactalbumin will undergo a transformation into another fibril polymorph under mild changes in salinity and temperature. Many methods have been employed to analyze the transformation but tryptophan fluorescence is the only one that illuminates changes in the unordered part of the fibrils making its application vital to understanding the transformation process.

Alina Walcek, "Carbon Isotopes and their use as a Stratigraphic Marker in New York State." Senior Thesis, Geology. Thesis Advisor: Dr. Langhorne Smith.

Carbon isotopes can be a valuable tool to aid in the understanding of the stratigraphy of New York. Carbon is present in the atmosphere and oceans in two forms, ^{13}C and ^{12}C . Oceanic organisms preferentially use the light isotope to form calcite, which is then precipitated out of the water and forms limestone over long periods of time. If less ^{12}C is available, the organisms will use ^{13}C . Carbon changes are thought to occur worldwide essentially at the same time. During the Ordovician, the carbon shows a distinct change from having a larger proportion of ^{13}C to having a larger proportion of ^{12}C , and then a return to more ^{13}C . This excursion is known as the Guttenberg Carbon Isotope Excursion (GICE). Correlating the GICE can be used to infer rates of subsidence during the Taconic Orogeny, and to document the change between rock formations during the interval of the GICE.

Session III

LC 11: Presentations

Lior Huli, "Process integration and synthesis of Single-walled Carbon NanoTube." Undergraduate Research Initiative Project, Chemistry. Faculty Mentor: Ji Ung Lee.

Single-walled Carbon NanoTubes (SWNTs) have unique electronic and mechanical properties and diameters of only a few nanometers. Their sp^2 carbon-carbon bond structure results in great strength and allows efficient conduction of heat. The cylindrical carbon SWNT molecules have novel properties that make them potentially useful in many applications in nanotechnology, electronics, optics and other fields of materials science. Chemical Vapor Deposition (CVD) is typically used to produce SWNTs of high quality and purity. The synthesis of the nanotube is made by passing a carbon-containing gas, such as a CH_4 , over a catalyst of iron nanoparticle supported by Alumina. This catalyst is reliable, productive and easy to make. It can produce SWNTs with diameters of ~ 1-3nm and lengths of several microns to over one hundred microns. The amount of nanotubes grown can be controlled by the choice of gases, flow rates and temperature. The integration of SWNT growth in integrated semiconductor devices provides a new set of challenges. In order to grow SWNTs in certain orientations and locations, a complex pattern transfer process for the catalyst must be investigated. In this work, we describe the integration process steps required to grow SWNTs in devices over a 300mm silicon wafer. Scanning electron microscope (SEM) and electrical tests are used to verify and evaluate the progress in the development of a robust catalyst pattern transfer process.

Joshua LaRose, "High Resolution Rutherford Backscattering Analysis of Nanoscale Thin Films." Independent Study Project, Physics. Project Advisor: Dr. Mengbing Huang.

Rutherford backscattering spectroscopy (RBS) has been an important analytic method for determination of the depth distribution of elemental concentrations in materials. The depth resolution of RBS is typically limited by the energy resolution of ion detectors. In this work we demonstrate the use of a compact magnetic spectrometer as the ion energy detector for high-resolution RBS analysis. The magnetic spectrometer offers several advantages: (1) a high energy resolution $\Delta E/E \sim 1/2000$; (2) a large bending power for MeV ions; and (3) a particular configuration allowing for true 180° RBS analysis. By combining this magnetic spectrometer with the grazing angle geometry, we have achieved a depth resolution better than 5 Å for RBS analysis of concentration distributions in elemental (e.g., Ta) and compound (e.g. HfO₂) thin films using 2 MeV helium ions. These experimental results suggest that high-resolution characterization of nanoscale thin films can be realized using MeV ions in conjunction with such magnetic spectrometers. The advantages of our method for nanoscale thin film analysis over medium energy ion scattering (MEIS) will be discussed.

Whitney Sperazza, "Silencing the Female Narrative: Elements of Folklore in Shakespeare's *Macbeth*." Senior Honors Thesis, English. Thesis Advisor: Dr. Ineke Murakami.

Presidential Award for Undergraduate Research Nominee.

In *Macbeth*, Shakespeare creates a power imbalance that challenges the gender ideals of early modern England. While taking into consideration the gender ideals presented through the other characters, I specifically examine the witches' role within the gender/power relations of this play. The "Weird Sisters" wield a masculine power through their influence over the Scottish monarch, and their connection to both the common witch-lore of Renaissance England and the female narrative. The witches, as representations of the powerfully vocal female, are, at an unconscious level, a palpable threat to Shakespeare's original audiences. Using the witches as my main evidence, in this paper I examine the ways in which the theater of early seventeenth century England endorsed a socially progressive notion of gender and how, through *Macbeth* and other plays, Shakespeare created radical power shifts and new gender ideals within the walls of English Renaissance playhouses.

Session IV

LC 12: Presentations

Charlene Bradt, "J.M. Coetzee and the Politics of Animality." Senior Honors Thesis, English. Thesis Advisor: Professor Paul Stasi.

Presidential Award for Undergraduate Research Nominee.

In the field of post-humanities, theorists have grappled with the production of the human-animal distinction and its political, ethical and juridical implications. The investigation of human relationships to animals reveals the unfavorable consequences that result from the hierarchical division between species. Through the literary works of J.M. Coetzee, this essay will investigate how this hierarchy prompts human beings to employ the division between species as a method to decide what constitutes a human being, necessarily resulting in multi-species oppression and exploitation on a colossal scale. Dealing specifically with Coetzee's *Waiting for the Barbarians*, *Disgrace* and *Elizabeth Costello*, this essay will use lens of post-humanist theorists alongside the work of literary critics to investigate the human-animal distinction and what it entails for past and present socio-political endeavors. This essay examines the correlation between human-animal distinctions and race classifications, as well how this distinction manifests itself in acts of sexual violation in Coetzee's work. Additionally, this essay employs Coetzee's texts to consider the political consequences of animality, arguing an inability for justice to exist in the political sphere as long as multi-species hierarchies are in place.

Jennifer Kowalski, "Being the Object and the "Other": The Women of Morrison's *Paradise* and Naylor's *Linden Hills*." Senior Honors Thesis, English. Thesis Advisor: Professor Paul Stasi.

Presidential Award for Undergraduate Research Nominee.

This paper addresses the histories of black women in literature as they seek ownership over themselves and their bodies. Using Karl Marx's concept of "fetishism of the commodity," feminist, and race theory, I seek to connect the objectification of black women's bodies to the dehumanization which occurs in the capitalist market. Toni Morrison's *Paradise* portrays women valued solely for their bodies, however through a sense of community; these women are able to "decolonize" both their minds and bodies. Gloria Naylor's *Linden Hills* presents women left only with the belongings they have acquired as middle class women living in the suburbs. Alone, these women are forced to destroy their bodies to end their objectification. The women of *Paradise* and *Linden Hills*, seek to find a place for themselves within a patriarchal and capitalist society, however, it is the methods which they use that determine whether this space will ever be found.

Kira Lansing, "Four Novels and their Metamorphosis into Film." Independent Study Project, Languages, Literatures, and Culture. Project Advisor: Dr. C. Aida Torres-Horwitt.

The transition from novel to film is often a difficult process, the results of which can leave audiences amazed by the artistic precision with which a literary work is brought to life or utterly dismayed by the watered-down motion picture version of a beloved story. A novel's reinterpretation into film is further complicated when the original work is highly representative of a specific culture and/or history, making it easy to disappoint or possibly offend audiences by even slight divergences from the precursory content. With this in mind, I have chosen four novels that are representative of four distinct cultures and histories, intending to exhaustively compare them with their film adaptations. The literary works come out of Colombia, Spain, Portugal and Chile and were published between 1875 and 1985. The analyses of the novels' sociocultural, political and historical contexts have proven them to be artistic reactions to societies in a state of ideological struggle. My query is, then, whether or not the film versions of the novels accurately represent this central component of the narratives. Here I will present my work on Gabriel García Márquez's El amor en los tiempos del cólera (1985) and Mike Newell's corresponding film, *Love in the Time of Cholera* (2007) as well as El crimen del padre amaro by José María Eça de Queiroz (1875) and Carlos Carrera's film by the same name, released in 2002. Other works covered in this study are (novel/film) Los soldados lloran de noche/*El laberinto del fauno* and La casa de los espíritus/*The House of the Spirits*.
