



Top to bottom: Richard Paul (*Graduate Assistant*), Rossanna Contreras-Godfrey (*Assistant Director*), Shahan Mamoor, Ruthie Fields, Nadia Aboussir, Gaelle Gourgues (*Counselor*), Ronald Mendoza-Dejesus, Hang Tran, Jonathan Aguilar, Colleen Silva, Leonardo Maya, Kuong Ly (*not in picture*)

Jonathan Aguilar

Biology/Pre-dental/Pre-med

Mentor: Peter Auger, Professor in Biology

Title: *Eastern Box Turtle in Comparative Analysis in Hammond Pond Reserve and Cape Cod*

Similar to many other terrestrial vertebrates in North America, the eastern box turtle *Terrapene carolina carolina* has been extirpated from much of its original range and is presently listed on the Massachusetts State Endangered Species List. Both field and laboratory model investigations and techniques associated with the reintroduction of eastern box turtles to the Metropolitan Boston area are described in this article. Sampling error associated with field radio telemetry techniques, home range determination and turtle movement patterns is illustrated through the use of a proposed new laboratory model system.

Nadia Aboussir

History

Mentor: Ann Norris, Associate Professor in Psychiatric/Mental Health

Title: *The Impact of Sex Ratio on HIV/AIDS*

The current HIV/AIDS pandemic has only recently been considered in terms of its impact on women even though many countries have been reporting drastically increasing numbers of female infection for years. My research applies the sex ratio theory from Marcia Guttentag and Paul F. Secord's foundational work, "*Too Many Women?*" to the current global

situation and assesses the consequences of gender imbalance on HIV infection in a given population. After carefully constructing expected outcomes, I gathered national and regional demographic statistics and analyzed them against current HIV infection figures. This analysis ultimately allowed me to explore the intimate relationship between sex ratios and HIV infection in women and argue that low sex ratio societies can expect increased female HIV infection rates.

Malcolm Joseph

Social Work

Mentor: Julia Whitcavitch-Devoy, Professor in Developmental Psychology

Title: *Racial-Ethnic Socialization of Adolescents*

Racial-ethnic socialization is the transmission of knowledge and communication from parent to child about race and culture. The numerous research previously conducted, have largely focused on conversations between Black/African-American parents and their children, ignoring other means that can contribute to racial-ethnic socialization. I will expand on the subject by introducing two other areas (school and community) to add depth to the conversation. Motivated by Bronfenbrenner's Ecological Systems theory and Bandura's Social Learning theory, I sought to observe if similar themes of ethnic-racial socialization that emerge in parent-child conversations, emerge in the school and the community. Do the schools promote racial equalitarianism and foster the cultural social growth of a child? Do communities promote racial segregation that result in racial and ethnic prejudices? Through recorded interviews, high school students will be asked to

describe issues of race, racism, and racial-ethnic socialization at their schools and in their communities. A common thread of experiences will emerge supporting my hypothesis that schools and communities are an integral part of racial-ethnic socialization as parents are. Results will help to expand the current conversations about racial-ethnic socialization and help adolescents' talk about their feelings on race.

Ruthie Fields

Mathematics

Mentor: Solomon Friedberg, Professor in Mathematics

Title: *Topology: An Intuitive Discussion*

My project this summer was a partial reading of Sue Goodman's *Beginning Topology*. Topology is the generalization of geometry that considers objects to be the same whenever one can be "nicely" deformed into the other. Leonhard Euler's 1735 paper solving the Konigsberg problem marked the beginning of graph theory and indeed all of topology. This talk will retrace the conceptual leap behind Euler's solution to the Konigsberg problem with the goal of motivating topology as a whole.

Shahan Mamoor

Biochemistry

Mentor: Junona Moroianu, Associate Professor in Biology

Title: *Analysis of the Interactions of Human Papillomavirus L2 Minor Capsid Proteins with Importin 7 Nuclear Import Receptor*

Human papillomaviruses (HPVs) are DNA tumor viruses that

infect squamous epithelial cells of the anogenital mucosa or the skin. HPV infection is the primary cause of 99% of cervical cancers with high risk HPV16 being the most prevalent type. HPV virions consist of a molecule of DNA contained within an icosahedral capsid composed of L1 major and L2 minor capsid proteins. During the papillomavirus replication cycle, the L2 minor capsid protein enters the nucleus in the initial phase after uncoating of the incoming virions and in the productive phase when L2 together with L1 major capsid protein mediate encapsidation of the newly replicated viral genome. The basic paradigm for nuclear import is that a nuclear localization signal (NLS)-containing protein interacts in the cytoplasm directly, or via an adapter, with an import receptor belonging to the Karyopherin beta (Kap beta)/Importin beta family and is translocated through the nuclear pore complex into the nucleus. We have previously identified and characterized the interactions of L2 minor capsid proteins of high risk HPV16 and low risk HPV11 with Kap $\alpha_2\beta_1$ heterodimers and Kap β_2 and Kap β_3 nuclear import receptors (Darshan et al., 2004; Bordeaux et al., 2006). Here we investigated the interactions of HPV16 and HPV11 L2 proteins with Importin 7 import receptor. We found that both HPV16 L2 and HPV11 L2 interact with Importin 7 with high affinity and that Kap β_1 does not enhance these interactions. We are currently mapping the domain of L2 proteins for Importin 7 using previously characterized L2 mutants. We are also planning to extend these studies to the high risk HPV18 L2 and bovine papillomavirus 1 (BPV1) L2.

Leonardo Maya

Communications

Mentor: Roberto Avant-Mier, Professor in Communication

Title: *“Our Anthem”: An Application of Critical Discourse Analysis to the National Anthem Controversy*

This paper takes a look at Latinos/as in the United States media and how the media shape and represent them. I first reviewed scholarly journals and books written about Latino/as in the US and how music influences national identity. Little has been written about the Spanish translation of the "Star Spangled Banner" titled "Nuestro Himno" which caused a lot of controversy in the US. Using the method of Critical Discourse Analysis, this paper then takes a deeper look into President Bush's responses to certain questions regarding immigration reform and "Nuestro Himno" during the Rose Garden news conference in 2006. The analysis finishes by looking at what vernacular voices in society had to say about "Nuestro Himno" and immigration through Internet blogs, newspapers, and online radio shows.

Ronald Mendoza-DeJesús

Philosophy

Mentor: Kevin Newmark, Associate Professor in French & Literature

Title: *An Uncanny Encounter: Poe, Lacan, and Derrida at Crossroads of Truth*

One of the crucial moments in the recent history of the encounters between psychoanalysis, philosophy, and literature,

is the debate that took place between French psychoanalyst Jacques Lacan and French philosopher Jacques Derrida around Edgar Allan Poe's short story "The Purloined Letter." This project consists of a reading of the three implicated texts, namely, Poe's "The Purloined Letter," Lacan's "Seminar on 'The Purloined Letter,'" Derrida's "Le facteur de la vérité." The first part of the paper is a summary of Poe's story. In the second part, Lacan's "Seminar" is treated along two main lines: on the one hand, the "Seminar" is read as an illustration of Lacan's return to the letter of Freud, to the truth of Freud's own psychoanalytic experience. On the other hand, the "Seminar" is also read as an elucidation of the truth of Poe's text. The third and final section of this project consists of a reading of three themes of Derrida's "Le facteur de la vérité": the remainder, the narration of Poe's text, and the letter as the materialization of the signifier. After taking into consideration Derrida's exposition of the limitations of Lacan's reading of Poe's story, the last pages of the paper raise some of the important questions that lie beyond its present concerns. Does Lacan break with the phallogocentrism that characterizes his earlier theories on language and sexuality? What is the relation between the concept of sovereignty and phallogocentrism?

Colleen Silva

Sociology/Hispanic Studies

Mentor: Brinton Lykes, Professor in Counseling/Dev/Psych

Title: *Femicide in Guatemala: Testing Terminology as Means to Conceptualize, Address, and Respond to Lethal Violence against Women*

Police reports show that, since 2001, over 2,500 women have been murdered in Guatemala. On average, two women are killed per day, often after having been raped, tortured, mutilated, and then found in a dumpster, back alley, or on the side of a highway. The concept of femicide – the killing of a woman or girl because she is female – has emerged as a means to describe this severe mass of murders in Latin America. This research explores the strengths and weaknesses of using the concept of femicide in order to understand, analyze, and respond to the lethal violence against women in Guatemala. In order to do so, we will consider the larger context of femicide, its relationship to genocide, and then use this knowledge to support a case for the term femicide to be formally adopted by the United Nations

Thu-Hang Tran

Secondary Education Teaching

Mentor: Cynthia Lyerly, Associate Professor in History

Title: *Tales of War, Memories of Home: Vietnamese American Women and the Transition from War to Peace.*

In recent years, many scholars have turned back to the Vietnam War and hope to uncover the history through the voices of those who lived through the time. Through their stories we discover new perspectives about Vietnam – its culture, its people, and their stories-- particularly the stories of the Vietnamese Women. This project conducts a series of personal interviews with six Vietnamese American women in Boston. The project is an oral history collection from their stories as women during the transitional period between war and peace in Vietnam. Who are these women? What was it

like to be the daughters, sisters, wives, and mothers in the Vietnam War? How the War shaped their life in history? These six women are the "living history" for our generation. This study will be part of a larger research project looking at gender dynamics in Vietnamese history during the Vietnam War.

Kuong Ly

International Studies

Title: "Strangers in a Strange Land: The Plight and Deportation of Cambodian-'American' Refugees Living in the United States"