

# TRiO McNAIR SCHOLARS

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## UNDERGRADUATE RESEARCH JOURNAL

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at the University of Illinois at Urbana-Champaign

Spring 2013 • Volume 1

**OMSA**

University of Illinois at Urbana-Champaign

**Office of Minority Student Affairs**

Serving Underrepresented and TRiO Students Since 1966



**ILLINOIS**

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



# TRiO McNAIR SCHOLARS

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## UNDERGRADUATE RESEARCH JOURNAL

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at the University of Illinois at Urbana-Champaign

**TRiO**

RONALD E. McNAIR  
POST-BACCALAUREATE  
ACHIEVEMENT PROGRAM

University of Illinois at Urbana-Champaign  
Spring 2013 • Volume 1

*"Whether or not you reach your goals  
in life depends entirely on how well  
you prepare for them and how badly  
you want them.*

*You're eagles!*

*Stretch your wings and fly to the sky."*

*-Dr. Ronald Erwin McNair*



DR. RONALD ERWIN McNAIR, the second African American to fly in space, was born October 21, 1950, in Lake City, South Carolina to Carl and Pearl McNair. He attended North Carolina A&T State University in Greensboro, where, in 1971, he graduated magna cum laude with a B.S. degree in physics. In 1976, at the age of 26, he earned his Ph.D. degree in physics from the prestigious Massachusetts Institute of Technology. Ronald E. McNair was nationally recognized for his work in the field of laser physics. In 1978, he was one of 35 applicants selected from a pool of ten thousand for NASA's space shuttle program and assigned as a mission specialist aboard the 1984 flight of the shuttle Challenger.

In addition to his academic achievements, he was the recipient of three honorary doctorates and numerous fellowships and commendations. He was also a sixth degree black belt in karate and an accomplished jazz saxophonist. He was married to Cheryl Moore and had two children, Reginald Ervin and Joy Cheray.

On the morning of January 28, 1986, McNair and his six crew members died in an explosion aboard the space shuttle Challenger. In his memory, members of Congress provided funding for the Ronald E. McNair Post-Baccalaureate Achievement Program to encourage low income, first generation college students to enroll in graduate studies. This program is dedicated to the high standard of achievement that Ronald E. McNair's life represented.

**The National McNair Scholar Pledge ©**

I \_\_\_\_\_ will strive to honor and respect the legacy set forth by

Dr. Ronald E. McNair and former McNair scholars

I will work earnestly toward the realization of my educational goals

I will embrace the challenge of attaining baccalaureate and post baccalaureate education  
through hard work, perseverance, and persistence.

I will strive to overcome any obstacles, barriers and limitations  
that might hinder, derail, or prevent my educational attainment.

I will endeavor to achieve excellence

By conceiving of and believing in excellence in my personal, professional and academic  
endeavors.

I will observe high ethical, moral and academic standards.

I understand that I must be trustworthy, honorable and noble

Respect myself, my peers, and the people who contribute to my personal and academic success

I will graciously extend myself and service to the uplifting of future TRiO students  
and promising scholars

I will be a part of the solution and not the problem;

I am a McNair Scholar and I believe in the words of Dr. McNair:

“Whether or not [I] reach [my] goals in life depends entirely on how well [I] prepare for them  
and how badly [I] want them.”

With this pledge, I hereby accept the responsibilities and privileges of induction into the Ronald  
E. McNair Postbaccalaureate Achievement Program.

*Conceived and Authored by  
Wallace Southerland III, Ph.D., Former Associate Director,  
McNair Program at the University of Maryland, College Park and  
Cheryl Bailey Gittens, Director  
McNair Scholars Program at Virginia Polytechnic Institute and State University  
with contributions by members of the national McNair Scholars community*

## **The Office of Minority Student Affairs History**

The Office of Minority Student Affairs exists as a result of campus leadership, local community support and the activism of local community leaders and African-American law students at the University of Illinois at Urbana-Champaign in the late 1960s. After the success of the Project 500 initiative in 1968 - which was created to increase campus enrollment by 500 minority students - Latina/o, Caucasian, Asian-American and low-income and first-generation students of all backgrounds also began matriculating through the project. With the increasing numbers came the need for a permanent campus program to increase retention and graduation rates of a diverse student population and provide services for the enrichment and development of underrepresented students at the campus. The 1960s leaders' vision of a diverse student population and persistence in seeing that they are supported resulted in what is now known as the Office of Minority Student Affairs, or OMSA.

Currently, OMSA coordinates more than a dozen programs and services to ensure the academic success of students who have been admitted to Illinois through the Educational Opportunities Program (EOP) or the President's Award Program (PAP), as well as underrepresented students, and those who are economically disadvantaged and/or first-generation college students.

### **Mission: A Social and Just Imperative**

Promoting educational access, opportunity, and success for historically-underrepresented students is a social and just imperative. OMSA is one of the longest-running and most comprehensive support units on the campus and in the United States. Under new leadership, OMSA is ready to serve and ready to lead efforts in support of student excellence and success.

On behalf of the campus and the Division of Student Affairs, the Office of Minority Student Affairs:

*provides services to students to assist with personal and academic achievement and serves as an advocate for students. OMSA serves underrepresented students, those admitted to the University through the Educational Opportunities Program (EOP) and the President's Award Program (PAP), first-generation and economically-disadvantaged students, and any student who is accepted through OMSA's affiliates program.*

## Acknowledgments

The TRIO McNair Program is grateful to so many people who support the program and contributed to making this edition of the *TRiO McNair Scholars Undergraduate Research Journal at the University of Illinois at Urbana-Champaign* a reality and dream come true.

Secretary of the U.S. Department of Education  
Arne Duncan

Our colleagues at the U.S. Department of Education's  
Office of Federal TRIO Programs

Associate Vice Chancellor for Student Affairs and Dean of Students  
Kenneth T. Ballom

Research Mentors

McNair Scholars and their Families

Members of the Office of Minority Student Affairs (OMSA)

### **Program Staff**

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Associate Dean of Students  
Director, Office of Minority Student Affairs  
University TRiO Director

#### **Michelle Cruz-Santiago, Ph.D.**

Assistant Director, TRiO McNair Scholars Program

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Program Assistant, TRiO McNair Scholars Program

*The TRiO McNair Scholars Undergraduate Research Journal is the official publication of the Ronald E. McNair Scholars Program at the University of Illinois at Urbana-Champaign. The journal includes abstracts of the students' final paper and represents combined efforts of students and their research mentors. The views expressed in the papers and abstracts are not intended to represent the views, beliefs, interests, values, or practices of the University of Illinois at Urbana-Champaign.*

*The program is funded by a Ronald E. McNair Post-Baccalaureate Achievement Program grant from the U.S. Department of Education.*

**2012 Summer Research Institute Faculty Mentors**

*Note: All Faculty Mentors are affiliated with the University of Illinois at Urbana-Champaign*

Aaron Benjamin	Professor	Psychology
Issac Cann	Professor	Microbiology
Soon-Jo Chung	Assistant Professor	Aerospace Engineering
Ollie Watts Davis	Professor	School of Music
Jody Endres	Assistant Professor	Natural Resource and Environmental Science
Dorothy Espelage	Professor	Educational Psychology
Susan Farner	Lecturer	Kinesiology and Community Health
Christopher Freeburg	Assistant Professor	English
Rebecca Fuller	Associate Professor	Animal Biology
Peter Goldsmith	Associate Professor	Agriculture and Consumer Economics
Robin Jarrett	Professor	Human and Community Development/African American Studies
Michael Krassa	Associate Professor	Political Science
Philip Krein	Professor	Electrical and Computer Engineering
Reed Larson	Professor	Human and Community Development
Christy Lleras	Associate Professor	Human and Community Development
Hellen McDonald	Assistant Professor	School of Social Work
Marisell Melendez	Professor	Spanish, Italian, and Portuguese
Ruby Mendenhall	Assistant Professor	Sociology/African American Studies
Faranak Miraftab	Associate Professor	Urban and Regional Planning
Stephen Notaro	Lecturer	Kinesiology and Community Health
Alice Novak	Lecturer/Assistant Head	Urban and Regional Planning
Lissette Piedra	Assistant Professor	School of Social Work
William Qualls	Professor	Business Administration
Brian Quick	Associate Professor	Communication
Marcela Raffaelli	Professor	Human and Community Development
Brent Roberts	Professor	Psychology
Richard Rodriguez	Associate Professor	English/Latina/o Studies
Rebecca Sandefur	Assistant Professor	Sociology
Karen Sears	Assistant Professor	Animal Biology
Mirelsie Velazquez	Visiting Lecturer	Latino/Latina Studies
Cara Wong	Assistant Professor	Political Science/Asian American Studies



## Message from the Associate Dean of Students and University TRiO Director

Dear Reader:

I am delighted to share with you this inaugural issue of the *TRiO McNair Scholars Undergraduate Research Journal at the University of Illinois at Urbana-Champaign*. The young scholars have worked with a faculty or research mentor to learn how to develop and implement quality and relevant research in their respective fields. The research they have produced represents the result of applying creative ideas to research questions using systematic and rigorous methods of established research protocols in the STEM fields, the social sciences, and the humanities.

The TRiO McNair Scholars Program is a federally-funded program geared to provide research opportunities for first-generation college, low-income, and underrepresented undergraduates as a means of preparing them for graduate school. By combining undergraduate research with faculty mentoring and academic support services, the program paves the way to graduate school for students who are underrepresented in higher education. For the past 22 years, the program has been an important asset and contribution to the research culture on this campus and in the University of Illinois system. Since 1990, more than 400 students have benefited from the program's services, opportunities, and research mentoring. More than 60 percent of our TRiO McNair Scholars have been accepted into graduate schools, and over 50 scholars have attained their Ph.D. or other doctoral degree.

We are very proud of the success of our TRiO McNair Scholars Program and the students who have completed it. We anticipate that they will ultimately be leaders in their respective fields. I congratulate the McNair scholars, applaud the faculty mentors, and extend my appreciation to the staff for their dedication and for helping the next generation of scholars, scientists, faculty, and leaders achieve success.

With warm regards,

A handwritten signature in black ink, appearing to read "W. S. III". The signature is fluid and cursive, with the letters "W", "S", and "III" being the most prominent.

Wallace Southerland III, Ph.D.

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## Emergency Department Costs by Methods of Payment



**Doris J. Arevalo, Community Health**

Research Mentor: Stephen Notaro, Lecturer, Community Health

### Abstract

This study analyzes how the health care system is utilized by people living in the United States. The primary focus is on the use of Emergency Rooms and the forms of payment used by patients, as we are concerned with the costs of moving the uninsured population to Medicaid. This research analyzes data from the Health Care Utilization Project's (HCUP) 2006 National Statistics of all Emergency Department visits that resulted in discharge. Data specifically focuses on the recipients of Medicaid, the uninsured, recipients of Medicare, and those using private insurance. The 2006 population for each form of payment is also presented. Using the data, we have subtracted utilization rates between Medicaid and the uninsured and multiplied these rates by the mean cost of the Medicaid population. This result was then divided by 1,000 and multiplied by the total uninsured 2006 population to produce an estimated cost of moving the total uninsured population. After performing such steps, the results show that an estimated \$280,085,549,000 dollars would be the cost of insuring 47 million uninsured individuals with Medicaid from 2006. Still, there are numerous factors to be considered, such as the maximum percent each individual state will cover for its residents under Medicaid, as well as the health habits patients may adopt with Medicaid and the growth in population. Such research will contribute to the growing field of work on how to provide the best quality of care for patients at the best cost.

## Outsiders or Victims?: Addressing a Rural Community's Perceptions of Latino Migrant Workers



**Hortencia Arizpe, Social Work**

Research Mentor: Lissette M. Piedra, Assistant Professor,  
School of Social Work

### Abstract

Across various communities in the United States, Latinos are increasingly settling in areas unaccustomed to an influx of immigrant or Latino residents. This demographic change can complicate typical problems surrounding enforcement of housing and public health code. Furthermore, perceptions and attitudes towards Latinos and immigrants can complicate the way a community responds to the new settlement of Latinos, making it especially hard to enforce any sort of intervention. In one rural setting, service providers and community leaders have struggled for almost five years to deal with one case dealing with a substandard housing complex owned by Latinos and rented to Latino migrant workers and their families. This project used public records, interviews with individuals, and neighborhood observations to understand how perceptions affected the way this case was dealt with. The perceptions data was then organized into either positive, negative, or neutral categories. The results showed that language barriers, perceived economic threat and criminal threat, and negative perceptions of racial minorities in general act as a barrier for Latino inclusion into the community but that exposure and empathy from service providers allow for prompt and effective interventions for Latino issues. Neutral perceptions were mostly due to unfamiliarity with Latino issues and the Latino community.

## **Undocumented Students in Higher Education: *Struggling to Achieve the American Dream***



**Christian J. Biviano, Management with a concentration in international business**

Research Mentor: Mirelsie Velazquez, Visiting Lecturer,  
Department of Latina/Latino Studies

### **Abstract**

There are 65,000 undocumented high school students that graduate each year, with only approximately 5-10% of these students going on to attend a college or university. This paper discusses the struggles and barriers undocumented students face while applying to college and during their college experience. Some of these hardships include but are not limited to: citizenship status, social economic status, financial aid, immigration reform, education policies, and belonging to an existing minority group (Latinos) that is underrepresented in higher education. Lastly, an interview with an undocumented student supports the findings from literature review and allowed the student to tell his story and struggles to achieve the “American Dream.” There are thousands of determined undocumented college students who unlike their American-born or legalized peers, are burdened with the added pressures of finding ways to fund their educational endeavors, while facing a variety of social and educational challenges. Immigration policy and financial aid regulations are constraining vulnerable populations deemed undesirable and undeserving. Despite these challenges the students persevere and continue in their pursuit of a college education.

## Childhood Obesity in America: What Role Does the Food Industry Play?



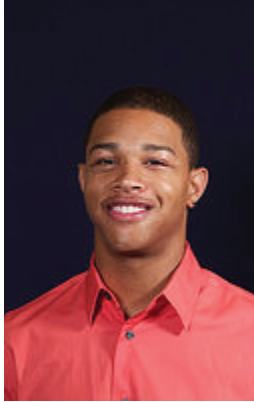
**Tyra Brown, Agricultural & Consumer Economics**

Research Mentor: Peter Goldsmith, Associate Professor, Agriculture & Consumer Economics

### Abstract

The objective of this research is to determine the impact of the food industry on childhood obesity. Childhood obesity is a growing health problem in the U.S that must be addressed properly and reduced effectively. To help fight the growing battle of childhood obesity, the food industry (and media) must work with the government to help the consumer make healthy food choices by enhancing consumer knowledge through nutritional education, promoting nutritional awareness, providing clear nutritional facts, developing and improving healthier product choices, and providing more controlled portion sizes. Presenting consumers with these things will hopefully motivate them to make a better lifestyle change and potentially control our struggle with childhood obesity.

## Examining Leadership and Stakeholder Relationships of Social Entrepreneurs: A Stewardship Approach



**Valentino Elliott, Economics**

Research Mentor: William J. Qualls, Professor, Business Administration

### Abstract

Social entrepreneurship addresses social problems using innovative business strategies and concepts to create a non-profit or for-profit organization/venture whose primary objective is to lessen a specific problem affecting a given population. This definition is consistent with the work of researchers such as Dees & Anderson (2006), Mort, Weerawardena, & Carnegie (2003), and Pomerantz (2003). For the purposes of this paper, this definition serves as the fundamental conceptualization of social entrepreneurship. In an effort to improve the welfare of society, the phenomenon of social entrepreneurship must be studied because of the economic and social value it generates. Research does not explain the relationship between social entrepreneurial management skills and stakeholders engaged in social enterprise, but this area of study is significant because these stakeholders' motivation is essential to accomplishing whatever the goal of the social enterprise may be. My research will examine the relationship and leadership/organizational qualities needed to be successful by reviewing literature relevant to this topic. Analyzing the effectiveness of social enterprises through the stewardship theory, I aim to describe and explain what leadership skills increase stakeholders' motivation, and attract volunteers and donors, as well as what organizational qualities are needed for a social venture to be successful. The results of my inquiry show that the most important skills for social entrepreneurs to possess are innovativeness, the ability to be risk-takers, and proactiveness. In addition, it is crucial that social entrepreneurs possess the ability to be advocates and develop a strong relationship with stakeholders.



## Patient Compliance with Physical Therapy Exercise Prescriptions



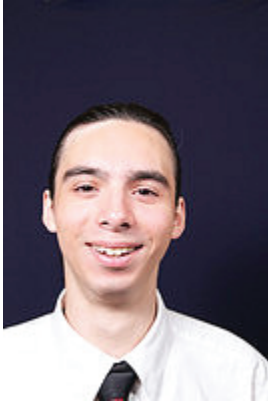
**Jessica Flores, Community Health**

Research Mentor: Susan Farner, Lecturer, Department of  
Kinesiology & Community Health

### Abstract

There has been only some research done on the successful effects of goal setting and patient compliance in physical therapy in order for patients to achieve maximum results. Three practicing physical therapists were interviewed in this study to explore how different groups of patients respond to their exercise regime and whether they face certain barriers when trying to recover. One of the questions examined was if there were different barriers within each group and should physical therapists address these issues to improve their patients' compliance. Another question asked was what the physical therapists told their patients if the patients felt discouraged or didn't see much improvement. Findings show that the physical therapists who worked with disabled university students faced a barrier in that the students often relied on Personal Assistants (PA) and if unforeseen circumstances arose, the Personal Assistants may have been unable to carry out their duties. In addition, it was found that all university students, whether disabled or not, faced the same barrier when completing their physical therapy exercises. They had to balance academic life with health, and finding the time to complete physical therapy exercises was especially difficult during finals. Future research could focus on interviewing patients and asking why they do or do not complete their home physical therapy program.

## Capacitor Voltage Balancing in a Cascaded Multilevel Inverter



**Joshua Garcia Sheridan, Electrical Engineering**

Research Mentor: Philip T. Krein, Professor, Electrical & Computer Engineering

### Abstract

This research is aimed towards optimizing an electrical control process called capacitor voltage balancing for a multi-level inverter, which converts direct current (DC) to alternating current (AC) in renewable energy conversion circuits and motors drives. The capacitor voltage balancing technique ensures stable and reliable operation of the inverter despite non-uniformities at the DC input. Previous methods to achieve capacitor voltage balancing are often complicated and only stabilize under limited conditions. Control theory is connected to practical application in simulation by analytically designing and experimentally verifying control techniques to achieve reliable and effective capacitor voltage balancing. Simulations of the control scheme based on realistic system operations and component parameters prove the robust character of the solution presented.

## Youth's Commitment to Responsibilities in Youth Programs



**Natali Gracia, Human Development and Family Studies**

Research Mentor: Reed Larson, Professor, Human & Community Development

### Abstract

This qualitative, grounded theory study was aimed at learning why youth remain committed to their responsibilities in youth programs and also, what role program leaders play in this process of youth commitment. The data analyzed was from the Pathways Project, which is a longitudinal study on youth, parents, and program leaders from project-based programs. Results show that in youth developing commitment, there were four themes: youth viewed their responsibilities as a team effort; youth had self-pride when responsibilities were completed; youth believed that responsibilities were achievable; and finally, youth were able to stay committed to their responsibilities when planning was done in advance. For the leaders' roles within these processes, there were three themes found, which highlighted the importance of: facilitating within a group of youth, supporting the youth through flexibility, and being present to serve as examples for the youth. In all, these factors were shown to play a role in the youth staying committed.

## Extracurricular Participation, Educational Expectations and College Enrollment Among Second-Generation Latino Youth



**Sandy Guzman, Human Development and Family Studies**

Research Mentor: Christy Lleras, Associate Professor, Human & Community Development

### Abstract

With the rapid growth in the Latino population in the United States, in the next few decades we will be presented with a new generation of potential college bound students. It is critical to comprehend how the educational system impacts Latino youth, and discover new ways that encourage underprivileged youth to successfully finish high school and acquire a post-secondary education. Social capital, particularly extracurricular activities, plays an important role in encouraging and helping Latino youth attain an education beyond high school. This study will specifically examine how participation in extracurricular activities affects second-generation Latino youths' educational expectations and post-secondary enrollment status, all while controlling for student's sex, family socioeconomic background, and high school grade point average. Utilizing data from the Educational Longitudinal Study of 2002, our results show that extracurricular participation is positively and significantly associated with educational expectations during high school as well as application and enrollment in post-secondary education among second-generation Latino youth.

## College Prep for *Whom?* The Changing Architecture of an African American School in a Gentrifying Community



**Olivia D. Hatch, Architecture**

Research Mentor: Ruby Mendenhall, Assistant Professor,  
Department of Sociology

### Abstract

This study focuses on architectural transformations to Martin Luther King High School as it transformed to Martin Luther King College Preparatory High School in a gentrified neighborhood on the south side of Chicago called North Kenwood. Gentrification is the renovation of low-income neighborhoods by middle-class individuals. Scholars argue that when a neighborhood undergoes gentrification, the schools are also renovated to reflect the new residents' demands for quality education. This study also focuses on the school's renovations between 1997 and 2002. In 1997, KHS was underperforming in attendance and test scores. In 1999 KHS was targeted for renovation and major changes in curriculum that would make it a selective enrollment college preparatory high school. I use data from eight in-depth interviews of students and staff to get their perspectives on King High School before the changes, King College Prep after the changes, the neighborhood during the different eras of the school, and how these changes affected staff and students. Utilizing Critical Race Theory (CRT) and how it interconnects with the issue of class, I argue that King College Preparatory High School's renovations and curriculum changes served as a signal to more affluent African American families that the refurbished high school was of good quality.

## **“Vocal Pedagogy”: An Investigation of the Foundational Aspects of Singing and Methods to Identify and Remediate Vocal Dysfunction caused by Chronic Respiratory Illness**



**Jasmine Henderson, Vocal Performance**

Research Mentor: Ollie Watts Davis, Professor, School of Music

### **Abstract**

Extensive research has been done on the structure and function of the vocal mechanism. This research project adds to the investigation of voice disorders and vocal dysfunction caused by upper respiratory illness. It will include a study of vocal pedagogy utilizing literature review, primary research interviews, and possible throat scoping observations. It will also include an examination of observations made by vocal performers and pedagogues. This study is a part of a growing research topic but this research was not focused on a specific respiratory illness, or a specific voice disorder/dysfunction. The investigator learned that being able to sing correctly doesn't prevent someone from contracting an upper-respiratory illness. However, for a singer, knowing how to sing correctly by learning the fundamentals and anatomy of the voice helps the singer approach voice dysfunction caused by a respiratory illness. Many of the remedies for voice dysfunction that were reviewed by the investigator were short-term programs. It is possible that there are many different ways to address this issue, but because of the lack of research done on therapy for this topic, there was no evidence of any long-term effects of voice therapy. And due to time limitations of this research, the investigator was not able to further investigate more treatments. This research project will contribute to future research on the study of voice performance and voice science.

## Grow Some!: Building Strong Communities through Community Gardens



### Naomi Hill, Sociology

Research Mentor: Robin L. Jarrett, Professor, Human & Community Development and African American Studies

### Abstract

This project focuses on the effects of community gardens on impoverished inner-city African-American neighborhoods in Chicago. The thesis for this study is that patterns of social organization associated with stable, well-functioning neighborhoods can be replicated in communities through gardens. My research explores how small-scale efforts of community gardeners have the potential to serve as building blocks for larger-scale community revitalization efforts and addresses the following questions: 1) What are the characteristics of the neighborhood in which community gardens develop? 2) What is the role of gender in community gardens? 3) What community building processes are associated with community gardening? 4) How does this research contribute to sociological theories? 5) What are the applied implications of the research? Findings emerging from this study provide insight into five themes of community gardening: 1) how they are created, 2) the mission of community gardens, 3) motivations for involvement in community gardening, 4) contributions of the garden to both individuals and the overall community, and 5) envisioned futures of community gardens. Results indicate that community gardens are established through collective efforts by community members and maintained through active participation and ongoing recruitment. While there is no explicitly stated mission during early development of gardens, over time, the goal of the community garden is for members to help each other as well as the overall community. Motivations for involvement stem from community gardeners wanting to make efforts to improve their personal wellness, and also build a stronger community. Contributions to individuals and the overall community include a new outlook on the neighborhood, hope for further improvements in the community, feelings of being enabled to pursue other goals, and various positive impacts on families, teens, and children. The future of community gardens rests in the ability to expand in space and plant variety, increase participation, and further develop the garden as a social space.

## Does Hard Work Pay Off in the Long Run? The Case for Savings Nudges



**Timothy Lewis, Economics & Psychology**

Research Mentor: Aaron S. Benjamin, Professor,  
Department of Psychology

Brent W. Roberts, Professor, Department of Psychology

### **Abstract**

Conscientiousness is the most predictive of the Big Five traits in a whole host of relevant life domains. Conscientious individuals experience a multitude of positive benefits including: increased life spans, more invested social lives, improved performance in education, more successful careers and greater lifetime income. The current paper explores the rarely studied relationship between conscientiousness and the propensity to save for retirement. The study shows that conscientious individuals are in fact more likely to save for retirement. The study also discusses the savings problem from a behavioral standpoint and evaluates current strategies to combat the issue, focusing on personality interventions aimed at increasing conscientiousness, financial literacy, and behavioral economic nudges.



## The U.S. Prison Population and Punitive Policies: Racial Disparities Among State Prisoners



**Sandra M. Lopez, Sociology**

Research Mentor: Rebecca Sandefur, Assistant Professor,  
Department of Sociology

### Abstract

The U.S. incarceration rate is the highest in the world. Many of the U.S. state prison systems are overcrowded at levels over 140% the intended capacity. This massive overcrowding is correlated with punitive policies that lead to longer prison sentence terms and disproportionately affect poor and minority populations-- especially African Americans, who are incarcerated at a rate of over 3,000 per 100,000 in the population. This paper reports on a state level analysis using data on the prison populations and state policies on sentencing and felon discrimination. Data came from the U.S. Department of Justice's Bureau of Justice Statistics. I analyzed how racial disparities and overcrowded prison systems are affected by crime and punishment policies like three-strikes-laws, truth-in-sentencing, abolished parole, felon employment discrimination, and felon disenfranchisement within the U.S. I determined that states with the same levels of overcrowding but differing levels of racial disparity differ in their use of punitive policies and are thus more punitive because of their greater racial disparity. This research focused on inequality, criminal justice institutions, and punitive policies within the U.S. criminal justice system.

## Emmett & Trayvon: Analyzing their Literal & Symbolic Relationship



**Ta'les L. Love, Broadcast Journalism**

Research Mentor: Christopher C. Freeburg, Assistant Professor,  
Department of English

### Abstract

The recent case of Trayvon Martin has sparked national public outrage and a sensational, overwhelming media response. The killing of the young African-American teenager has also garnered international headlines and created feelings reminiscent of those felt by African-Americans during the Civil Rights era. Many persons in the fields of media have declared the Martin case the modern day version of the 1955 Mississippi lynching of Emmett Till. Not only are these comparisons plentiful, they are widely accepted and have rebirthed the conversation of race relations in America. The following research explores the validity of these assumed connections and the media's responsibility in the portrayal of both young men through the analysis of newspaper articles, literary sources, and documentaries on the case of Emmett Till and the Civil Rights era. Overall, the cases of Trayvon Martin and Emmett Till are two cases that are embedded in the racial depths of America. To regress as far back as 1955 not only implies that America has not changed, but Black people themselves would also have to be in the same predicament as they were 60 years ago and this is simply not true. This assumption cannot be made and is in no way valid when the most powerful man in America, is in fact a Black man himself. While Trayvon and Emmett both represent something monumental, the symbolism in each case greatly differs. Trayvon Martin's case is not the modern day tragedy of Emmett Till, but a confirmation that racial profiling and the days of the late Rodney King may still exist.

## Latino Parents' Engagement in their Adolescents' Participation in Youth Programs



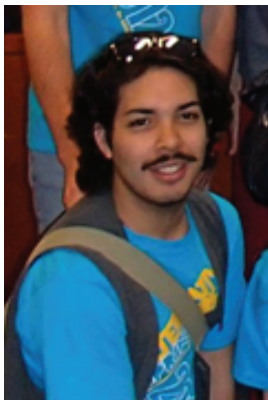
**Lorraine Munoz, Human Development & Family Studies**

Research Mentor: Marcela Raffaelli, Professor, Human & Community Development and Latina/o Studies

### Abstract

This study examines the types of parental support parents demonstrate to their adolescents in youth programs. Therefore, the question of interest is: how are Latino parents engaged in their adolescents' participation in youth programs? Parents of youth in organized youth programs were recruited for semi-structured interviews. Twenty-three parents were interviewed, 12 of those parents were Latino and 7 (males = 2, females = 5) of them comprise the analytic sample. Semi-structured interviews were conducted with trained interviewers. Interviews were recorded, transcribed, and checked and transcripts were analyzed for parental support. Themes identified were entered into a qualitative data management program, Nvivo 9. Findings indicated that Latino parents showed more indirect support than direct support. Parents who were directly supportive were more likely to be indirectly supportive as well. Common barriers included: work, time constraints, scheduling, and commitment conflicts. Overall, parents provide different kinds of support that can ultimately contribute to youths' participation in youth programs. The current study provides unique information about Latino parents' perspectives.

## Displacement and Latino Populations: Cultural Markers and Gentrification in Chicago Latino Communities



**Xavier Ramirez, Latina/o Studies**

Research Mentor: Richard T. Rodriguez, Associate Professor,  
English; Latina/o Studies

### Abstract

The term gentrification has been utilized to describe economic innovation as well as displacement. Currently cities across the United States are facing issues of gentrification. Various populations have historically settled, moved, been displaced and relocated throughout the city. For this research I will be focusing on two specific historically Latino neighborhoods in the city of Chicago: Humboldt Park and Pilsen. Latinos are one of the populations that have come to suffer from serial displacement in the city. Presently, gentrification has become a threat to these communities. Initiatives and coalitions have been created to defend the communities from being torn apart and displacing community members while simultaneously maintaining their identities as Latino communities.

## Reinforcement of Female Mating Preferences in Sympatric vs. Allopatric Populations of *Lucania goodei* and *L. Parva*



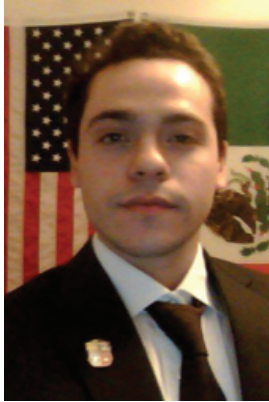
**Clare Rankhorn, Integrative Biology**

Research Mentor: Becky Fuller, Associate Professor,  
Department of Animal Biology

### Abstract

Low fitness of hybrid offspring can generate selection on mate preferences so individuals avoid mating with heterospecifics. This process is known as reinforcement and is observed as increased behavioral isolation in areas of sympatry compared to allopatry. We performed female-choice behavioral trials in which females of *Lucania parva* and *Lucania goodei* were allowed to choose between conspecific or heterospecific males. We tested females from both sympatric and allopatric populations using a novel female choice assay. Measures of time spent with each male revealed that females of sympatric populations prefer their own species significantly more often than females from allopatric populations. This pattern of preference was seen in both *L. parva* and *L. goodei* females. This shows that females prefer males of their own species only when from populations where there is the opportunity for hybridization. Our data suggests that reinforcement of female mate preference has occurred in sympatric populations of *L. parva* and *L. goodei*.

## Police Observation Devices, Gentrification, & Exclusive Real-estate Practices in Chicago's Pilsen and Humboldt Park Neighborhoods



### Arturo Romo, Urban Planning

Research Mentor: Faranak Miraftab, Associate Professor, Urban & Regional Planning

### Abstract

My research focuses on two shifts taking place in today's urbanized world. The first is a shift in law enforcement towards the use of surveillance technologies to monitor public spaces. The second shift concerns the displacement of poverty-stricken communities as gentrification decreases the availability of affordable housing in minority-dominated neighborhoods. This research concentrates on the intersection of these trends by analyzing the relationship between public police surveillance and real-estate investment practices in Chicago's Pilsen and Humboldt Park neighborhoods. Drawing from scholarly literature on surveillance and gentrification, this study sheds light on the role Chicago's police observation devices (PODs) play in gentrifying poor, minority-populated neighborhoods that are highly coveted by real-estate developers. My research also uses qualitative methods to analyze the perceptions local residents and community center representatives have towards PODs. The conclusions of this project reveal that minority stereotypes, the use of PODs to monitor minority populations (while simultaneously protecting new developments and gentrifiers), and the consequent increase in an area's cost of living are correlated and work to socially and economically displace low-income minorities from their neighborhoods. In order to fight the displacement of marginalized populations, it is vital that we understand the confluence of police surveillance and gentrification in Chicago.

## Teaching Students Counseling Skills: Training in MSW Field Work



**Kasandra K. Swanigan, Creative Writing & Communication**  
Research Mentor: Hellen G. McDonald, Clinical Assistant  
Professor, School of Social Work

### Abstract

In an accredited Master of Social Work (MSW) field placement site, MSW students are given the opportunity to practice what they learn in the classroom and apply it to real-life situations. What these placement sites are doing to make sure that students get the right training is essential to students' professional development. The field placement sites that were focused on were either currently active (with students) or had trained students within the last three years. The sites accepted MSW interns with a concentration in Mental Health. What exactly did these sites do to develop students' counseling skills? What sort of training did they offer MSW interns? What can these sites do to improve their counseling skills training? This paper offers an analysis of responses to an online survey that was completed by the field site supervisors. The survey questions were emailed to the field site supervisors via Qualtrics, an online survey software program. The responses are a way to gain valuable information regarding: 1. what students learned about counseling skills at their field placement sites, and 2. what specific training, if any, did they receive that enhanced their counseling skills. The findings suggest that the agencies provide various interventions through different teaching methods. Also, these agencies provide training that helps students to develop counseling skills. Inconsistencies in the study contribute to the low percentages of training that needs to be improved.

## Out of Place: Examining Black Males' Experiences with Racial Microaggressions at a Predominantly White Institution



**Artesha Williams, Social Work**

Research Mentor: Ruby Mendenhall, Assistant Professor,  
Department of Sociology and Department of African  
American Studies

### Abstract

Racial microaggressions are brief and commonplace daily verbal, behavioral, or environmental indignities, whether intentional or unintentional, that communicate hostile, derogatory, or negative racial slights and insults toward people of color (Sue et al. 2007:27). This study attempts to bring into focus the unique ways in which Black males perceive, interpret, and react to experiences with racial microaggressions and the role that these microaggressions play on Black males' views of campus climate and sense of belonging at PWIs. The Black male focus group data that I analyzed for the study was part of 11 focus group interviews that were conducted at the University of Illinois. My research questions included: How do Black males view campus climate? Do they have a sense of belonging? Do they report experiences with racial microaggressions? If so, how are these experiences unique because the participants are both Black and male? My research has found that with the help of Black male double consciousness, these men are able to perceive the automatic assumptions that Whites hold of them based on stereotypes. They are aware of the different dynamic that being a Black male creates in their experiences both in and out of the classroom. They react to these experiences of racial microaggressions by using this "knowing" to avoid confirming stereotypes and to carefully present themselves as bicultural on a predominantly White campus.



## The Impact of Adolescent Child Abuse on Psychosocial Outcomes



**Marissa Zayas, Psychology and Sociology**

Research Mentor: Dorothy Espelage, Professor, Department of Educational Psychology

### Abstract

Despite the existing literature on child victimization, the extent of research on youth victimization is limited (Deakin, 2006). This shortage highlights the importance and need for mental health practitioners to examine the impact of early victimization in childhood and its relation to psychosocial outcomes of adolescents. The present quantitative study examined an existing nationally representative dataset of 17,366 adolescents who completed the 2009 Dane County Youth Survey. Adolescents who indicated they were physically or sexually abused were analyzed across a variety of measures that include depression/suicidal ideation, bully victimization, alcohol use, delinquency, and bully perpetration. The purpose of this study was to analyze mean level differences between adolescents who have experienced child abuse within 30 days, more than 30 days but less than a year, more than a year ago, and never, utilizing four separate analyses of variance (MANOVA). MANOVA results indicated that the subgroup of 30 days or less scored significantly higher on all psychosocial outcomes in comparison to the other subgroups. Although the subgroup of 30 days or less had higher rates on all psychosocial outcomes, all other subgroups still displayed significantly higher scores on the outcomes when compared to the adolescents in the never group. Results from this study could further aid in gaining a better understanding of victimization and related mental health outcomes as well as lead to better treatments for victimized youth.





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