

# UCSB McNair Scholars Research Journal



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**UCSB McNair Scholars**  
**Research Journal**

**University of California, Santa Barbara**  
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Ricardo A. Alcaíno  
3217A Phelps Hall  
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(805) 893-4505

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# **McNair Program Staff**

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Dr. Beth E. Schneider

## **Assistant Director**

Monique Limón

## **Program Coordinator**

Micaela Morgan

## **Graduate Mentors**

Carlos Jimenez  
Andrew MacDonald  
Holly Roose

## **Writing Consultant**

Dr. Ellen Broidy

## **Journal Editors**

Dr. Beth E. Schneider  
Dr. Ellen Broidy

## **Journal Layout/Design**

Carlos Jimenez



# UCSB McNair Scholars

## Research Journal

2016 - Volume 6

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### Table of Contents

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McNair Program Staff	p. iii
Table of Contents	p. iv
Letter from the Executive Vice Chancellor	p. vii
Letter from the Executive Dean	p. ix
Letter from the Program Director	p. xi
Letter from the Journal Editors	p. xiii

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Jamelia Harris	p. 1
<i>The Concrete Roses: An Intersectional Analysis of Black Girls Unique Challenges and Vulnerabilities in the School-To-Prison Nexus</i>	

University of Wisconsin Mentor:  
Dr. Gloria Ladson-Billings  
Department of Curriculum and Instruction

UCSB Mentor: Dr. George Lipsitz  
Departments of Black Studies and Sociology

---

Jorge Dominguez	p. 38
<i>Habit Formation in Exercise: An Empirical Analysis of Exercise Habits</i>	

UCSB Mentor: Dr. Heather Royer  
Department of Economics

---

Jacqueline Lepe p. 60  
*The Effects of Residential Mobility and Neighborhood Context on  
Released Prisoners' Recidivism: A Review of Evidence*

University of Maryland: Dr. Kiminori Nakamura  
Department of Criminology and Criminal Justice

---

Anibal Lopez p. 83  
*Deliberation in the Federal Open Market Committee during  
Economic Challenges*

UCSB Mentor: Dr. John T. Woolley  
Department of Political Science

---

Eugenie Guzelian p. 106  
*Examining Sex Differences in Stress-Induced Potentiation of  
Ethanol Sensitivity*

UCSB Mentor: Karen Szumlinski  
Department of Psychological and Brain Sciences

---

Bertin Solis p. 125  
*Latino Parental Engagement: A Case Study of  
Four Latino Immigrant Parents' Engagement with the Local  
Control and Accountability Plan*

UCSB Mentor: Dr. Richard Duran  
Department of Education

---

Paola Villegas p. 153  
*Vivimos en Conflicto (We Live in Conflict): University-Induced  
Displacement in Isla Vista, CA*

UCSB Mentor: Dr. George Lipsitz  
Departments of Black Studies and Sociology

---

Adriana Sánchez p. 184  
*Understanding Academic Resilience: Latina Community College  
Transfer Students' Experiences*

UCSB Mentor: Dr. Melissa L. Morgan-Consoli  
Department of Clinical, Counseling, and School  
Psychology

---

Sylvia Garcia p. 213  
*Why are Polar Bears Still being Hunted?*

UCSB Mentor: Dr. Tommy Dickey  
Department of Geography

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Contributors p. 239

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Ronald E. McNair Biography p. 244

## Letter from Executive Vice Chancellor David Marshall

I am very pleased to introduce Volume VI of the UC Santa Barbara *McNair Scholars Research Journal*. Named after Dr. Ronald E. McNair Jr., physicist and NASA astronaut, the national McNair Scholars Program is a program designed to provide research opportunities for first-generation college, low-income, and underrepresented undergraduates with the goal of preparing them for graduate school. Our local UC Santa Barbara McNair Scholars Program supports our campus efforts to advance the diversity and quality of our students, and to prepare them for success beyond their undergraduate experience. By combining undergraduate research with faculty mentoring and academic support services, the McNair Scholars Program provides a path to graduate school for students from families that in the past may not have considered even an undergraduate college education.

UC Santa Barbara is very proud to have been formally designated as a Hispanic Serving Institution. UCSB is the first member of the American Association of Universities (AAU)—an elite group of the 62 top research universities in North America—to receive this designation. As a public research university, UC Santa Barbara strives to support all of its students and to give them the knowledge, understanding, and skills to make future contributions to the State of California.

The *McNair Scholars Research Journal* recognizes the research accomplishments of a select group of undergraduate scholars from a wide range of disciplines who have successfully completed our McNair Scholars Program. Their contributions to this journal represent the hard work and intellectual creativity of students who, we expect, will become leaders in their respective fields. In our program, students develop a strong bond with mentors who offer guidance and serve as role models in order to help the students realize their potential. The journal also reflects the contributions of

the faculty mentors who exemplify the dedication of our campus to undergraduate success.

The quality, originality, and creativity of the scholarship published here are very impressive. This research augurs well for the future contributions of these students to scholarship and society. I congratulate the McNair Scholars, applaud their faculty mentors, and extend my appreciation to the staff of the McNair Scholars Program for their dedication and work in helping these students succeed.

David Marshall  
Executive Vice Chancellor

## **Letter from Executive Dean Melvin L. Oliver**

Over the last six years it has been my pleasure to welcome readers to the UCSB McNair Scholars Journal. As one of the founding co-PI's of the initial McNair Grant and during the last four years, the Executive Dean of the UCSB College of Letters and Science, this yearly welcome has been one of the greatest honors of my time at UCSB. I have marveled at the profundity of the work of these student apprentices who have developed and grown under the watchful guidance of their faculty mentor. I have been deeply impressed with their mastery of scientific and humanistic methodologies which have enabled them to answer significant research questions and make probing analyses of social and cultural phenomena. Each year the research has been as impressive and engaging as in the past.

I am on my way to become President of Pitzer College in Claremont, California. At Pitzer we will be looking to McNair scholar alums among those who will become the next generation of our faculty. As these scholars join previous cohorts of UCSB McNair graduates in prestigious graduate and professional schools, we are confident that they will become the necessary first generation, and often underrepresented minorities, who will be the resources for higher education as our student population becomes more diverse and our nation's productivity becomes increasingly reliant on the academic, economic and social success of this multiethnic mosaic.

The UCSB McNair Scholars program is uniquely situated in the College of Letters and Sciences, indicating the importance of this effort as part of the College's core belief that diversity and excellence are both necessary to advance knowledge in the 21st century. I want to acknowledge and express my appreciation to the Director, Dr. Beth Schneider, the Assistant Director, Monique Limon, Program Coordinator Micaela Morgan, Writing Consultant

Dr. Ellen Broidy, graduate mentors, and the array of faculty mentors who have selflessly given of their time, for creating the kind of supportive and nurturing environment that has made the production of this journal possible. And finally, I want to salute the McNair scholar authors who, I hope, will look fondly upon this publication as one of their first in a long line of research publications in a significant academic career!

Go Gauchos and farewell!

Sincerely,

Melvin L. Oliver  
SAGE Sara Miller McCune Dean of Social Sciences  
Executive Dean of the College of Letters and Science

## **Letter from McNair Program Director, Dr. Beth E. Schneider**

As the Director of the UCSB McNair Scholars Program since its inception, it is a continuing pleasure to showcase the work of some of our outstanding students in this Volume VI of the UCSB McNair Scholars Program Research Journal.

These student authors spent 18 months or more with the UCSB McNair Scholars Program. Expectations were high for the scholars, and each of our authors met them, presenting their faculty-mentored scholarship at two or more poster sessions in academic symposium on our campus and at a variety of professional associations. The students are taking a variety of paths to their next academic experience. Among this current group of 9 authors is one senior who will begin master's training at Columbia University in 2017, two taking a gap year before going on to graduate school, one who will attend law school at the University of Iowa, and five who will begin doctoral programs in Fall 2016 at the following excellent universities --- two at UCSB and one each at UC-Berkeley, UCLA, and Northwestern.

The papers published in Volume VI are the final versions of manuscripts our graduates were willing to see through to publication. They went the extra mile, writing and rewriting in response to a steady stream of comments from their mentors and the journal editors. As undergraduate research papers, we expect that these publications will be the first of many manuscripts published by these students during their graduate training and in their first academic or policy-related positions.

The passion, perseverance, patience, and diligence displayed by the scholars will serve them well as they continue with professional training in their respective fields. For all first-generation, low income, and underrepresented undergraduates, the existence of the journal and the labor it represents continues to be an inspiration in their pursuit of research opportunities, successful



mentorships, and a serious professional future in which the McNair Scholars Program played and continues to play an important part.

Special thanks to the UCSB McNair Scholars staff and graduate student mentors. Most importantly, congratulations to the scholars.

In pride,

Beth E. Schneider  
Professor of Sociology  
Director, McNair Scholars Program

**Letter from the Editors,  
Drs. Ellen Broidy and Beth E. Schneider**

The McNair Scholars Program at UCSB is pleased to bring you the sixth volume of the UCSB McNair Scholars Research Journal. A cooperative effort of faculty mentors, McNair staff, and most especially a dedicated cadre of student scholars, the journal represents months of research, writing, editing and reviewing on the part of all the participants.

For our scholars, preparation of their manuscripts for publication in the Journal began as a challenging and ended as a rewarding experience. Novices when they started the process, the scholars embarked on a year-long adventure in what it takes to produce academic work suitable for publication. With good humor and extraordinary patience and fortitude, they experienced the frustration of being asked to revise and revise again and then the feeling of elation that comes with a final acceptance. Through this process, the McNair staff was able to provide scholars with a practical hands-on introduction to the types of writing and revision expected of graduate students and academics.

Submission to the Journal was never a requirement of participation in the UCSB McNair Scholars Program so we were enormously gratified that a number of our students graduating in 2016 decided to allow their work to be put under the editorial microscope. While we would have liked 100% participation, previous publication arrangements with faculty mentors meant that some scholars were unable to submit their work. The scholars who contributed worked diligently on their papers, rethinking, rewriting, reorganizing, and in some instances, reconceptualizing core ideas in response to comments from faculty mentors and the Journal's editors. We applaud them all for their hard work and commitment. We want to say a special thank you to the faculty mentors who worked

alongside the students to guide them in the production of work of such high caliber.

We trust that you will enjoy reading the work of the UCSB McNair Scholars represented in this sixth volume of the Journal. We look forward to bringing you the voices of new generations of scholars in subsequent volumes and thank you on behalf of the authors, mentors, and editors who made this publication possible.

Best,

Ellen Broidy

Writing Consultant, UCSB McNair Scholars Program

Beth E. Schneider

Professor, Department of Sociology

Director, UCSB McNair Scholars Program

**The Concrete Roses:  
An Intersectional Analysis of Black Girls Unique Challenges  
and  
Vulnerabilities in the School-To-Prison Nexus**

**Jamelia Harris**

University of Wisconsin Mentor: Dr. Gloria Ladson-Billings  
Department of Curriculum and Instruction

UCSB Mentor: Dr. George Lipsitz  
Departments of Black Studies and Sociology

**Abstract**

*The sustained educational disenfranchisement of Black youth in U.S. schools is regularly noted in public and scholarly discourse. Despite the implementation of federally funded initiatives such as the No Child Left Behind Act (2001), Black youth are perpetually pushed out of classrooms through disciplinary practices in urban, rural, and suburban schools. While many scholars have investigated the pervasive disciplinary disparities facing Black youth, they often focus on Black boys while neglecting the experiences of Black girls in the 'school-to-prison pipeline' discourse. This absence reinforces the implicit assumption that Black girls are not susceptible to similar vulnerabilities as their male counterparts and marginalizes their unique experiences. In actual practice, they suffer from many of the same practices that criminalize Black boys, but also experience gender specific obstacles that boys do not have to confront. This study incorporates an intersectionality framework to better understand Black girls' experiences based on their overlapping social identities as both Black and female. It deploys a qualitative analysis of video testimonials recorded by the African American Policy Forum and the Girls for Gender Equity in New York City. The study finds that the conjunction between Black girls' identities and their situated social subject positions makes them vulnerable to suspensions and expulsions. Yet they are punished more for their condition than for their conduct. This research seeks to challenge the silence about the marginalization of girls through an examination of the adverse treatment that Black girls experience in schools.*

## **Introduction**

On May 16<sup>th</sup>, 2010 Aiyana Stanley-Jones, a seven-year old Black girl from the east side of Detroit, Michigan was asleep at her grandmother's home, when the Detroit Police Department's Special Response Team mistakenly entered the residence during a midnight raid. Officer Joseph Weekley discharged a single bullet that entered Aiyana's head and then exited her neck, leaving her body lifeless. Initially, Weekley was charged in connection with Aiyana's death but prosecutors cleared him in 2015, ensuring he would face no repercussions for his negligence that resulted in the premature death of Aiyana Stanley-Jones.

The police killing of Aiyana Stanley-Jones dramatizes both the site and the stakes of this research about the gendered dimensions of the war waged against Black bodies. Police brutality is a global phenomenon that disproportionately plagues Black communities, evidence of a powerful and pervasive anti-Black racism that takes the lives of Black people under the cover of law. The lack of punishment meted out to Officer Weekley and other killers of Black women and men sends a clear message that legally constituted authorities will nearly always view police attacks on unarmed Blacks as self-defense, that Black skin is viewed as a threat, that Black existence itself has been criminalized and that even Black children are to be prematurely treated as problematic adults. Aiyana Stanley-Jones's death underscores the urgency of a commitment to the principle that Black Girls' Lives Matter. The distinct race and gender-specific nature of this statement is necessary. While women accounted for 20% of unarmed people of color killed by the police between 1999 and 2014, widespread assumptions about racial violence presume that Black males are the only targeted victims of state-sanctioned violence. Though the scope of this study does not explicitly concentrate on the myriad instances of police brutality that take place every year, it draws explicit parallels between police surveillance, harassment, arrests, and killings and the discipline deployed inside the United States

education system, a system that similarly uses fear and violence to victimize and disenfranchise Black youth while escaping scrutiny.

Michelle Alexander's *The New Jim Crow* (2010) exposes the U.S. education system as a "vestige of Jim Crow Segregation that remains separate and unequal for marginalized youth." Researchers who have sought to understand the root causes of persisting racial inequalities in schools have identified school discipline as a contributing factor (Howard, 2010; Crenshaw, 2015). The combination of racially inflected school policies and the increased involvement of law enforcement in school discipline have created a school-to-prison pipeline in which punishments such as suspensions, expulsions and school-based arrests are frequently used to deal with perceived misbehavior (Rios, 2011). Such policies and practices facilitate criminalization on school campuses that perpetuates the subsequent disproportionate confinement of Black boys *and* girls (Nanda, 2012).

Current research often neglects the narratives of Black girls in 'school-to-prison pipeline' discourse, minimizing their unique experiences and vulnerabilities, pushing them to the margins of visibility. Furthermore, much of the literature reviewed outside of the feminist framework misleadingly uses 'Black youth' while in actuality it highlights statistics that reflect only the status of Black boys in schools. When we hear the term youth in the context of school-to-prison pipeline and other conversations concerning state violence there is an implicit assumption that we are in fact discussing the circumstances of Black boys. Black girls' experiences are absent from school-to-prison pipeline discourses, which reinforce a dangerous cycle of erasure that limits the development of research capable of identifying resources needed for their advancement. This omission has also established an implicit assumption that allows the needs of Black boys to preclude investigation of the personal and institutional barriers encountered by Black girls, as evidenced by male-centric initiatives, such as President Barack Obama's *My Brother's*

*Keeper* (Hartmann et. al, 2015). Yet, as Kimberle Crenshaw demonstrates in her report, *Black Girls Matter: Pushed Out, Overpoliced and Underprotected* (2015), Black girls are subjected to criminalizing and punitive forms of school discipline that parallel the conditions endured by their male counterparts. Racial disparities in suspension and expulsion rates confront all Black youth, but a breakdown by gender reveals conditions and consequences of school discipline that are particular to Black girls and warrant special consideration and examination.

The present study incorporates an intersectionality framework to better understand the particular challenges and vulnerabilities Black girls experience based on their race, class, and gender statuses (Crenshaw, 1993; Shields, 2008). The term *intersectionality* is a central principle of feminist research. It can be defined as the “mutually constitutive relations among social identities” (Shields, 2008). In Kimberle Crenshaw’s landmark article, *Mapping the Margins: Intersectionality, Identity Politics, and Violence Against Women of Color* (1993), she reinforces the importance of examining the ways in which multiple dimensions of women’s identities simultaneously impact their experiences. Crenshaw posits that the intersections of racism and sexism factor into Black girls and women’s lives in ways that cannot be captured entirely by looking at the race or gender dimensions separately.

## **Background and Relevant Literature**

Researchers, policymakers, and social justice advocates have sought to highlight the salience of racial disparities in school discipline that undermine the United States’ commitment to securing equal opportunity for all students. Despite the reauthorization of the Elementary and Secondary Education Act, commonly known as the *No Child Left Behind Act* (2001), Black youth are continually pushed out of urban, rural, and suburban schools through disciplinary practices.

The U.S. Department of Education Office for Civil Rights issued the *Civil Rights Data Collection* (CRDC)<sup>1</sup>, a compilation of each public school's discipline, restraint, and seclusion data reflecting the years 2010 and 2011. The CRDC reveals unsettling racial disparities occurring in U.S. public schools: whereas Black students comprise 16% of the student population, they represent 32-42% of students suspended or expelled. In comparison, white students also represent a similar range of between 31-40% of students suspended or expelled; however, they constitute 51% of the student population. These statistics reveal that Black students across the nation are being suspended and expelled at a rate three times higher than their white counterparts: on average 5% of white students are suspended in comparison to 16% of Black students.

Even more overwhelming were statistics disclosed in the same report that reveal a similar trajectory occurring among preschool aged children. While Black children represent 18% of preschool enrollment, they represent 48% of preschool children receiving more than one out-of-school suspension. In comparison, white students represent 43% of preschool enrollment but account for only 26% of children receiving more than one out of school suspension (CDRC, 2014). These percentages reveal that there is a state of emergency regarding Black education that should not be treated as an isolated phenomenon. Instead, these statistics reflect a complex manifestation of inequity that will be explored in the present study.

## ***Race***

Researchers in the field of educational equity have found that the racial opportunity gap is echoed in suspension and expulsion disparities (Howard, 2010). Studies reveal that students who struggle with reading and mathematics are most vulnerable to exclusionary discipline such as suspensions and expulsions

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<sup>1</sup> This report accounts for 99% of public schools across the nation.



(Dauber, 1994; Howard, 2010). Black students in elementary, middle school, and high school comprise the highest proportion of students performing “below basic” levels in reading and mathematics achievement (NCES, 2006). Concurrently, low-performing students received the majority of disciplinary actions in schools. These students, who would benefit most from additional support and engagement from their teachers, are receiving a clear message when they are excluded from the classroom environment. Students who are subjected to suspensions or expulsions often report feeling disengaged and separated from school (Winn, 2011; Crenshaw, 2015). This might influence students to deemphasize the importance of education. Research shows that suspensions and expulsions reduce the likelihood of graduating on time and often lead students to drop out (ACLU, 2008). School punishments and students’ attitudes operate in a reciprocal feedback loop. Students who are most susceptible to exclusionary discipline internalize feelings of resentment towards their schools, and in many instances their teachers (Rios, 2011). When the academically underperforming students experience disparate rates of exclusionary discipline, the necessity to reform school disciplinary policies is underscored.

Many studies have investigated the policies that perpetuate punitive measures such as suspensions, expulsions, and school-based arrests that disproportionately criminalize Black youth (Rios, 2011; Laura, 2014; NAACP, 2014; Crenshaw, 2015). Among these, the zero tolerance policy consistently emerges as the most problematic (Morris, 2012; Nanda, 2012; Burt, 2014; Crenshaw, 2015). In schools, a zero tolerance policy punishes students for any infraction of a school rule, no matter how slight, without consideration of the circumstances under which the infraction was committed (ACLU, 2008). While these policies were initially implemented in response to the 1999 Columbine High School shooting, they have since been expanded and are now most commonly used to regulate far less serious infractions (Lowrey, 2013). This model of punishment takes after “Broken Windows”

policing, a zero tolerance technique that encourages police officers to aggressively target communities of colors through quality of life offenses, resulting in irrational punishments for minor offenses.<sup>2</sup>

Critics of zero tolerance policies argue that they are disproportionately harmful to racial minorities and institutionalize a pathway from school to the prison system (Rios, 2011; Crenshaw, 2015; Winn, 2011). It is important to acknowledge the irony that policies created in response to two enraged white teens that murdered and injured dozens of people at Columbine High School are now disproportionately disciplining racial minorities who commit non-violent and even trivial offenses. In *From Zero Tolerance to Compassion* (2014), Jalise Burt argues that zero tolerance policies contribute to the underachievement and increasing dropout rates among students of color. She also suggests that these policies misconstrue the core value of schools, which should be to educate and enrich as opposed to punish. Other scholars have also identified the damaging nature of zero tolerance culture and surveillance, suggesting that these policies and practices undermine Black student achievement (Blake, 2011; Morris, 2012; Crenshaw, 2015).

In many schools disciplinary practices often have harsh, adult-like consequences that deprive Black youth of their claim to childhood (Ladson-Billings, 2011). A 2008 study conducted by the Florida Department of Juvenile Justice showed that Black youth were two and a half times more likely to be referred to the juvenile justice system than their white counterparts. More recent data shows that while Black students represent 16% of student enrollment, they make up 27% of students referred to law enforcement, and 31% of students subjected to a school-related arrest. In comparison, white students represent 51% of students

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<sup>2</sup> Broken Window policing has been under serious scrutiny following the police caused death of Eric Garner, who was choked by NYPD for allegedly selling illegal cigarettes (Sneed, 2014).

enrolled, 41% of referrals to law enforcement, and 39% of those subjected to school-related arrests (ACLU, 2014). These statistics support research that shows Black students are most frequently subjected to severe punishments for the same infractions as non-Black students (Nanda, 2012). Policies that were implemented with the “intent” of fostering an *engaging, safe, and productive* learning environment are instead placing students in jails where they are physically barred from an adequate or equitable education.

### ***Socioeconomic Status (SES)***

Poverty influences the ways that students experience schools. Many youth living in resource poor communities are exposed to an environment of violence that can negatively impact their mental wellbeing, physical health, and life opportunities (Howard, 2010). This violence does not exist only within their neighborhoods, but is also manifested and perpetuated on their school campuses. Schools concentrated in high poverty areas with the highest proportion of minority students enrolled disproportionately use on-campus militarized policing and control tactics such as metal detectors, surveillance cameras, and security personnel (Rios, 2011; Winn 2011). A common but erroneous interpretation of school discipline issues holds that student suspensions and expulsions stem from the students themselves, from their immersion in a culture of poverty, their lack of motivation for achievement, their disinterest in education and limited linguistic and intellectual skills (Morris, 2005; Howard, 2010; Winn 2011). Yet researchers have found that affluent students more often reported receiving only minor and sensible consequences for disciplinary infractions, while low-income students reported receiving more severe and demeaning consequences for the same offenses (Skiba, et.al, 2002). Moreover, studies where researchers controlled for Socioeconomic Status (SES) have found that race influences the disciplinary outcome independent of socioeconomic status (Skiba, et.al, 2002; Howard, 2010). The overrepresentation of Black and those of lower

socioeconomic status in school discipline contributes to racial stratification in school and society (Alexander, 2010; Lipsitz, 2012; Marrus, 2014).

## *Gender*

Consistent evidence demonstrates the overrepresentation of Black youth and those of lower socioeconomic status in school discipline and the criminal justice system. Yet the intersection of race and gender is also an important factor. Kimberle Crenshaw's *Black Girls Matter* report provides data reflecting the disproportionate rates of discipline experienced by Black girls. In Boston, for example, Black girls comprised 61% of all girls while white girls represented only 5%. While there were 3 times as many Black girls as white girls enrolled in this particular school district, Black girls were subjected to discipline 11 times more often than their white counterparts. Black boys represented 57% of all boys who experienced discipline, compared to white boys, who represented only 7%.

More drastically, in New York City during the 2011-2012 year, Black girls comprised 90% of all expulsions while no white girls were expelled. Meanwhile, Black boys in New York City were expelled at a rate ten times higher than white boys in the same district (Crenshaw, 2015). The purpose of highlighting intra-gender racial disparities is not to pit Black girls' conditions against those of their male counterparts. Instead, these statistics have broader implications that reflect Black girls' particular vulnerabilities to punitive, zero tolerance policies. When analyzing the structural conditions that perpetuate inequality in education it is essential to view inequality as multi-faceted and interconnected. In the next section of this paper, I review literature that pertains to the distinct vulnerabilities, racial biases, and structural inequalities that manifest in the lives of Black girls who are disproportionately subjected to school discipline and premature criminalization.

## ***Disproportionate Minority Confinement (DMC)***

Research that focuses on Black girls' disproportionate confinement is limited. The current studies indicate that Black girls are the fastest-growing segment of the juvenile justice population. They are overrepresented among those who come into contact with the criminal and juvenile justice systems (Nanda, 2012; Sherman, 2012; NAACP, 2014). During the years 2009-2010, Black girls represented less than 17% of all female students and yet comprised 31% of all girls referred to law enforcement and approximately 43% of girls who had experienced a school-related arrest (George, 2015). A Florida study (2010) found that Black girls received harsher punishments than white girls even after controlling for factors such as age, previous indictments, and crime severity. The study also found that Black girls were more likely than their white counterparts to be rearrested for nonviolent crimes (Nanda, 2012).

Acute discipline disparities are especially noticeable when comparing the severity of punishments meted out to Black boys and Black girls for similar offenses. For example, Black girls receive harsher punishments than boys for status offenses, such as running away or truancy (Nanda, 2012). Intra-racial disparities validate the need for research to consider Black girls' intricate experience with the ubiquitous system of criminalization also known as the *youth control complex*. The "youth control complex" is a phenomenon that was introduced to the field of sociology in 2011 by Victor Rios. He uses this concept to describe the collective effort of social institutions (e.g. schools, families, communities, and the criminal justice system) to systematically punish, stigmatize, and control Black and Latino males, but girls are caught up in it as well.

Black girls are subjected to race and gender stereotypes by authority figures, which can trigger "social correction" responses when such behavior is considered to deviate from social norms (Morris, 2005; Morris, 2007; George, 2015). Women and girls are

punished for refusing to conform to white expectations of femininity. For Black girls the penalties of not conforming are particularly punitive (Nanda, 2012). In many cases, Black girls' freedom depends upon the leniency and discretion of judges and attorneys. This is problematic because judges who hold gender biases have the ability to sentence a Black girl more severely for offenses that are socially perceived as masculine behavior such as fighting. Scholars have identified implicit racial bias as a primary influence in discretionary discipline decisions (George, 2015). However, very little research has been devoted to understanding the complex interaction between implicit racial bias and gender stereotypes that might facilitate Black girls' entry into the juvenile justice system. The limited studies available show that Black girls have yet to be regarded as a high priority for research and policy development, despite their worsening circumstances.

### ***Perceptions: A Gendered Youth Control Complex***

Racial and gender stereotyping imposes significant barriers to educational achievement for Black girls (Morris, 2005; Morris, 2007, Crenshaw, 2015), who are more likely than white girls to be penalized for behaviors that challenge society's traditional perceptions of femininity. Researchers have found that Black girls are overwhelmingly suspended for "disrespect," "disobedience/insubordination," "profanity," and "disruptive" behavior (Burt, 2014). This coincides with the findings of other studies that indicate Black girls are often punished for more subjective and non-violent offenses that are at the *discretion* of school administrators (Morris, 2005; Jones, 2010; Morris, M.W, 2012; Crenshaw, 2015; George, 2015). It is important to emphasize the word *discretion* because ultimately teachers and school administrators' biases can influence the degree to which a particular student is disciplined. Edward W. Morris's study, "*Ladies*" or "*Loudies*" (2007) draws attention to some of the biases and stereotypes that educators hold toward their Black female students. Throughout his study, he observes the ways in

which teachers encourage Black girls to exemplify “feminine” characteristics such as ‘soft spokedness’ and docility. One teacher actually described the Black girls at their school as “loudies,” rather than ladies. Morris’s study opens the door to future research about the gendering of race and the racialization of gender. He remarks, “The stereotypes and resulting treatment pertaining to Black girls were unique to them, although certainly influenced by dominant ideas of race, class, and gender.” Morris also notes that discipline was typically designed to turn the behavior of Black girls into what was considered to be gender-appropriate. Nikki Jones, in *Between Good and Ghetto* (2009), highlights that Black girls who are considered well behaved are those who abide by the expectations of a white feminine hierarchy. This hierarchy systematically positions Black girls at the bottom, which might foster division between those labeled as “good girls” and those labeled as “ghetto girls” (Jones, 2009). Teachers sometimes exhibit favoritism toward students who model the standards of white femininity, which is harmful to Black girls.

Anti-Black sentiments and gender prejudices internalized by educators and administrators affect Black girls in criminalizing and critically harmful ways. Black girls have been imperiled by irrational punishments for counteracting expectations of respectability. In 2010 when Alabama Black teen Erica DeRamus attended her prom wearing a knee-length strapless dress, school administrators issued her a dress code infraction because her dress lacked length and revealed cleavage. Erica was given the ultimatum of either corporal punishment or off campus suspension. She chose suspension because she felt paddling was too “belittling for someone her age” (NAACP, 2014). Similar incidents include Black girls being suspended and even expelled for wearing natural hairstyles such as Afros or locs to school (NAACP, 2014; Crenshaw, 2015). School administrators use discipline as a means to enforce white social conformity as the baseline norm for Black youth (Morris, 2005).

## ***Vulnerabilities***

Research documenting Black girls' specific experiences in the school to prison nexus suggests that they are confronted by adversarial consequences that their male counterparts do not have to experience (Blake et. al, 2010; Winn, 2011; Morris, 2012; Nanda, 2012; Burt, 2014; NAACP, 2014; Crenshaw, 2015). Discussions of these multifaceted vulnerabilities are absent from existing bodies of literature that examine racial and gendered adversities through a one-dimensional framework. One facet of Black girls' vulnerabilities stems from their demanding family obligations and responsibilities. This workload can be even more burdensome in poor and working class households where girls are regularly expected to fill in for working parents or guardians. In addition to their school course load, girls are expected to handle household chores, childcare responsibilities, and hold jobs (NAACP, 2014; Crenshaw, 2015). "Youth in hard-pressed low-wage families who have younger siblings are likely to grow up very fast and take on adult roles thus diverting time and attention from their schooling, extracurricular activities, and personal development" (Albelda & Dodson, 2012). Limited research investigates the impact that household responsibilities have on Black girls' educational outcomes; however, several scholars have said that these additional obligations leave little time for valuable extracurricular activities (NAACP, 2014; Crenshaw, 2015).

Black girls are more likely to experience teen pregnancy than their white counterparts: 45% of Black girls and young women will become pregnant at least once by age 20, which is more than one and a half times the national average (Perper & Manlove, 2010). Nearly half of Black teen mothers, 48%, currently live below the poverty line. In addition to caring for their own children and pursuing their education, Black teen mothers often struggle to find sufficient financial resources to sustain themselves and their children. Among Black teen mothers who gave birth before the age 18, only 46 % earned high school diplomas. It is



important to emphasize that 54% of Black teen mothers do not graduate from high school. These girls are being pushed out and betrayed by a nation that once pledged ‘no child would be left behind.’ Their push out is perpetuated by a lack of resources and support services, discriminatory policies, and labor demands (Burt, 2014; NAACP, 2014; Crenshaw, 2015). Pregnant teens have also reported barriers at the micro-level such as stigmatization, discouragement, and harassment from school administrators that force them to leave school reluctantly (NAACP, 2014).

Black girls experience the highest rates of sexual and intimate partner violence on school property. In a survey, 12% of Black female high school students revealed that they had experienced some sort of abuse from their partners. Another survey found that 56% of Black school-aged girls reported experiencing some form of sexual harassment on campus (NAACP, 2014). Violence of any sort can interfere with the academic performance of a survivor (Nanda, 2012; Crenshaw, 2015). In California for example, students who reported experiencing sexual harassment were more likely to miss school, have low grades, abuse substances, and suffer from depression than students who were not harassed (ACLU, 2008). Oftentimes teachers and administrators are uncaring when responding to Black girls’ reports of harassment (Morris, 2007; NAACP, 2014; Crenshaw, 2015). These administrators’ lack of urgency is rooted in anti-Black attitudes that hyper-sexualize Black girls (Morris, 2012; Burt, 2014; Crenshaw, 2015). Black girls who decide to defend themselves against sexual harassment can be penalized for violating zero tolerance policies as a result (NAACP, 2014; Crenshaw, 2015). Female students who have survived sexual harassment or assault describe their schools as traumatic spaces of violence and feel that they cannot, and do not return to them.

Jalise Burt’s *From Zero Tolerance to Compassion* (2014) looks at the school-to-prison pipeline through a critical lens that focuses on the experiences of Black girls who have survived

physical and sexual violence. She finds that these girls continue to experience victimization because of punitive policies and punishments on their school campuses. Girls who are subjected to violence are more likely to demonstrate aggression, heightened sexual behavior, and other deviant social behaviors (Burt, 2014). Likewise, girls who have been exposed to domestic and sexual abuse often seek assistance through “acting out” or misbehaving in the classroom (Nanda, 2012; Burt, 2014; NAACP, 2014; Crenshaw, 2014). Classroom disruptions are typically cries for help but are instead responded to in the same manner as behavioral misconduct. Research shows that girls who lack access to counseling and mental health resources can express their frustrations through violent or aggressive behavior (Morris, 2012; Burt, 2014; NAACP, 2014). This can contribute to the overrepresentation of Black girls in “exclusionary” punishments and special education. Burt’s work explores the possibility of diminishing discipline disparities through expanding school-based mental health services to vulnerable students. This would especially benefit students who lack the resources, support, and experience to navigate their emotional traumas.

Among detained girls in the juvenile justice system, 70% had been exposed to some form of trauma, 65.3% had experienced symptoms of posttraumatic stress disorder (PTSD) sometime in their lives, and 48.9% of these incarcerated girls were experiencing the symptoms of PTSD. The relationship between sexual and physical abuse survivors and juvenile justice system involvement should not be overlooked: 85% of incarcerated girls have experienced physical or sexual abuse (Nanda, 2012). A survey of youth in residential placement found that 42% of girls and 22% of boys in custody reported past physical abuse. This study also showed that a history of abuse is a stronger predictor of delinquent behavior for girls than it is for boys (Sherman, 2012). Discipline disparities also highlight the issues affecting Black girls who have been victims of violence, trauma, and harassment. Research suggests that survivors of sexual assault can be disempowered and

disengaged from school (Morris, 2007; Morris, 2012; NAACP, 2014; Crenshaw, 2015). In an interview cited by Jalise Burt (2014), an incarcerated woman said that as a high school student she regularly was disciplined for sleeping in class. Administrators were not aware that she resorted to falling asleep in her classes because at home her mother's boyfriend would attempt to molest her in the night. This inability to recognize the problems girls face emotionally harms students and demonstrates a need for administrators to establish personal relationships with all students. Rather than supporting and protecting Black girls, schools often damage them further by funneling them into the carceral system (George, 2015).

## **Methodology**

### ***Data***

The main purpose of the empirical part of this study is to analyze from the girls' perspectives the gender-specific challenges and vulnerabilities experienced by Black girls in social institutions. Here the term "social institutions" can best be understood as "A complex of positions, roles, norms and values lodged in particular types of social structures and organizing relatively stable patterns of human activity with respect to fundamental problems in producing life-sustaining resources, in reproducing individuals, and in sustaining viable societal structures within a given environment" (Turner, 1997).

Few scholars, apart from Maisha Winn, Kimberle Crenshaw, and Nikki Jones have focused on the actual narratives of Black girls who have been victimized and silenced by punitive policies and systems. To compensate for what is absent in the literature, data was collected using video footage from the African American Policy Forum's "Breaking Silence: Hearing on Girls of Color in New York City." The footage captures a town hall hearing that was hosted at the Columbia Law School's Center for

Intersectionality and Social Policy Studies on October 11th, 2014. The town hall created a space for girls of color to deliver testimonies about their intersecting identities as they interact in institutions such as schools, the criminal justice system, and the foster care system. These girls spoke in front of a panel of researchers, faculty members, policymakers, and other educational stakeholders. This study also uses interviews presented in the Girls for Gender Equity NYC video “Black Girls Breaking Silence on School Push-Out,” in which members of the *Sisters in Strength Youth Organization* share their experiences with school discipline.

### ***Procedure***

To address my research question I employed a qualitative meta-synthesis approach that integrates the collective research findings about a particular area of inquiry to generate overarching inductively derived claims. Whereas a variety of scholars have explored the gendered disparities, consequences, and perceptions that complicate the traditional framework of the school-to-prison nexus for Black girls, I used this meta-synthesis approach to generate comprehensive and substantial claims beyond those that can be “warranted on the basis of individual qualitative studies” (Thorne, 2008).

A qualitative content analysis was conducted to identify key themes that reoccurred across the video testimonials. To further validate findings derived from the qualitative analysis, I examined secondary statistical data from annual reports on school discipline disparities. Heaton (2004) states that secondary data analysis is “a research strategy which makes use of pre-existing quantitative data or pre-existing qualitative data for the purposes of investigating new questions or verifying previous studies.” Finally, I organize and analyze data with the goal of empirically illuminating categories, themes, and concepts.

## Data Analysis

The intersectionality framework was used to understand how gender, race, and class collectively influenced the challenges and vulnerabilities experienced by the 11 Black girls who courageously shared their personal narratives at the “Breaking Silence” hearings.

### *Gender Norms*

Across the 11 interviews, these young women expressed feeling confined and in many cases limited by the gender norms that defined their social experiences. These standards of femininity are manifested in the lives of each girl in distinctive ways based on the other aspects of their identities. In one interview, Whitney described her complex experience as a woman of color as “feminized” and multi-faceted. Whitney starts by acknowledging the resilience of the young women before her who have shared their testimonies. She then calls to the young women’s attention that in addition to racial and economic struggles, they are weighted down by the gendered burden of *caretaking*:

“So while we’re being harassed by those construction workers, we’re rushing home to feed our brothers and sisters that we’re responsible for.... So for example in my life I am economically, socially, and emotionally responsible for an uncle who’s locked up. He’s facing a 10-year sentence but he’s also been locked up for most of my life. So, I’m the 3<sup>rd</sup> generation of women in my family to support him. My mom and my grandma... they don’t want to do the visits anymore and that’s okay because sometimes we need breaks. I am the person getting the 9 am phone calls where he’s asking me to put money on his books... and I’m a student so thinking about that type of caretaking adds pressure.”

Whitney's testimony demonstrates that in addition to traditionally recognized forms of gender-related vulnerabilities, such as sexual harassment, caretaking adds additional stresses to the lives of young women. Women are expected to conform to the standards of socially constructed gender roles. Qualities ascribed to the "ideal woman" include: femininity, beauty, respect, nurturing, motherly, caretaker, and loving (Morris, 2007). This conflicting relationship between Whitney's gender role and her other status identities is evidenced especially in her statement regarding her uncle. Research often focuses on the overrepresentation of men of color in the prison system; however, the narratives and wellbeing of their loved ones who await them outside of the system remains unheard (Laura, 2012). In addition to her obligations as a student, and an older sister, Whitney feels compelled to assist her uncle by providing him financial support while he is incarcerated. Whitney describes these gendered obligations as part of the "superwoman syndrome." This term is commonly used by western sociologists to describe a woman who works hard to manage multiple roles including worker, homemaker, and student, in addition to some other traditionally considered masculine roles (Hansenin, 1984). Whitney relates that these multiple expectations left her physically, emotionally, and mentally exhausted. She goes further to say that these additional pressures could potentially compromise her education, which could result in her push out from school.

In several interviews girls expressed being reprimanded for not conforming to normative white gender standards. Based on their race, gender, and sexual orientation they felt as though they had been silenced and marginalized by societal expectations. One short statement encapsulates this sentiment. Within the first few seconds of her testimony, Nakia states: "I feel like I lack a voice in my school community...not only because I'm a woman but also because I am Black." She goes on to discuss how her status as a Black woman has denied her access to a quality education and has also concealed important parts of her history from being included in her school's curriculum. In response, she joined the Girls for

Gender Equality organization to seek deeper understanding of her Black heritage and identity. In another interview, Miasia discusses the criminalization and silencing of Black girls voices:

“I was recently suspended from school because I decided to speak back to my dean because I felt like a situation I was going through wasn’t right. I felt like I was being disrespected by multiple teachers on multiple occasions. And I decided to voice my opinion about it and how I felt. And I was told that it was talking back and it wasn’t necessary. Like I felt like... I felt like my voice was almost being pushed aside and like I just had to follow their rules. And I didn’t like it so I spoke about it and that caused me to have suspension from school for a whole week.”

This excerpt demonstrates the harsh consequences girls face for challenging traditional gender norms that assume women should be quiet, compromising, and without opinions. Miasia’s attempt to protest the disrespect she encountered from her teachers was undermined by her dean’s biases. Her experience parallels those from other studies that found that Black girls are often punished for more subjective infractions such as “disobedience,” “disrespect,” and “defiance” (Nanda, 2012). In another interview, Zainab shared a similar experience:

“I’ve been suspended four times... and currently at the school I am in I’ve been suspended three times. Since the first time I’ve been suspended my grades have dropped. And I was near honors before and now I’m like failing so it’s just since those weeks that I’m suspended I just get behind so... I’m very cautious now of what I do in school because I know if I say something then it will be taken to the extreme.”

Earlier in the interview Zainab states that she was initially suspended for breaking her classroom pencil sharpener. She also explains that at her school, teachers have the option to request a mediation program in which they meet with students to resolve a conflict. In this instance, her teacher opted to suspend her instead. Zainab's experience with excessive punishment is supported by research that found that girls who are punished for behavior that is perceived to be male-like or aggressive are often subjected to harsher sanctions (Nanda, 2012). Other research has found that Black girls are often perceived as "loud" and are more likely to be disciplined for speaking out (Morris, 2007).

Zainab says that during each of her suspensions she was sent home for nearly a week. When she returned to class she was so far behind that her grades began to suffer. Her experience also demonstrates that exclusionary punishments hinder students' ability to excel academically and force them to miss out on critical instruction time (Howard, 2010; Crenshaw, 2015). Because her teacher refuses to communicate behavioral expectations with Zainab through an intervention, she has responded by disengaging from the classroom out of fear that she will be punished for speaking out, again.

As Nanda states in her article *Blind Discretion* (2012), "Stereotypes are particularly dangerous within a system that is built on subjective discretion." Negative perceptions of girls of color can influence the judgment of decision makers and compromise girls' wellbeing. This is evident in Daniella's statement:

"A lot of times as a young person I realize that my voice would be silenced. Because technically I wasn't educated enough to be put in the position to advocate for myself. And when advocating I was only put into mental institutions. When advocating I was only left to be the one who is always loud, the



one who has no direction, the one who needs medication. And I refused medication. Because often times in care that's what you have. You have this mental disability because you faced so "many traumatic experiences." No, I didn't face traumatic experiences... I faced life, in a very different way."

Daniella starts by identifying her age as a factor that people have used to invalidate and silence her. Because she is young, she is perceived to lack understanding of the impact that her life circumstances have had on her mental health. She also mentions being considered 'loud' when she tries to advocate for herself. She was then falsely diagnosed and placed into a mental health facility. In addition to gender stereotypes, her experience might also reflect a cultural disconnect between her and the decision makers who were charged with assessing her mental health. Because Daniella's experiences were unfamiliar to these decision makers, they assumed them to be "traumatic experiences." Previous research shows that stereotypes can play a role in decision-making amongst prosecutors, judges, police officers, and other facets of the juvenile justice system. An NAACP report observes that "The intersection of race, gender, and class creates a 'distorted image' of girls of color, making adults in the juvenile justice system more likely to see girls of color, particularly Black girls, "as delinquents — as social problems themselves rather than as young girls affected by social problems" (NAACP, 2014). Daniella de-stigmatizes her "traumatic" experiences to remind the audience that people from different social environments experience life differently.

Gender stereotypes and implicit bias can operate at the subliminal level but have exclusionary and harmful impacts on those victimized by these judgments. In an extremely powerful testimony, Octavia Lewis expresses that her trans identity makes her feel as though she never had the opportunity to be pushed out because she was never allowed into her school:

“I was that young lady that had to change my appearance before I got to school so that I could try to fit in with my friends and change before I left school so that I could fit in with the demeanor that my parents expected of me. So suspension became my best friend because it allowed me to separate myself from what was considered the gender norm. Sexual harassment was also my first cousin it was something that I got use to on a daily basis. It was something in which administrators told me: ‘If you didn’t act a certain way... this wouldn’t happen to you.’ Safety was my dead grandmother because safety was something I never knew. Safety to me would have just been, “its okay.” Detention I knew that oh too well... detention was a way of life in a sense.”

In addition to being prevented from expressing her identity at home, Octavia Lewis faced severe exclusion on the school grounds. She explains that the only way she and other trans-identifying students were allowed to receive an education was if they were willing to stay after school for detention. These students were prohibited from engaging with the rest of the students because school administrators perceived that their sexual expression detracted from the school’s learning environment. This unjust treatment caused Octavia to feel as though administrators consider her to be less than human. Most sobering is when she says that she finds comfort in her suspensions because they allow her to reject traditional gender norms and live without fear of judgment. Octavia says that during suspension she is able to “separate from the colonization of the gender binary system” that criminalizes her existence.

The data available on Black LGBTQ youth illustrate the challenges these students face when simply showing up to school, and the serious repercussions that negate their educational success.

According to a 2011 survey, 56% of LGBTQ Black students experienced verbal harassment based on sexual orientation at school, and 43% experienced harassment based on gender expression. Over half (54%) of Black LGBTQ students felt unsafe at school because of their sexual orientation and 36% felt unsafe because of their gender expression. Octavia Lewis's experience with discriminatory treatment emphasizes the need for additional research data on the experiences of Black LGBTQ and gender nonconforming youth.

Octavia also mentions being sexually harassed by her peers on school grounds. When reporting her abuse to school administrators she is victimized even further by their criticism, neglect, and apathy. School administrators tell her that the reason she experiences such violence is because of her outward gender expression. Many Black girls' reports of sexual assault and violence are met with indifference reflecting inadequate support services. This pattern of non-response has a detrimental impact on the academic outcomes of Black girls, especially when the violence is taking place on school campuses (Morris, 2007; NAACP, 2014; Crenshaw, 2015).

### ***Distrust of the System***

For other girls, punishment was not only meted out by school administrators, but also by a negligent legal justice and foster care systems. For example, Margaret recounts her experience with the foster care system when seeking help for her mother who was experiencing a drug relapse:

“I had no face in the foster care system. I saw no care. When I was eight years old they didn't help me, so I didn't believe they would help me now.... After 4 weeks of waiting for her to get back to me ... I only learned that there was nothing she could do for me. ‘You will be 18 soon and you can move out on your own.’ But where does the help come in

at? To move out I would have to quit high school... I wanted to go to college... I have to take the SAT I still couldn't concentrate. I have to buy my own clothes and food. But this is what being on your own feels like. What about my sister? What about my mother? I don't exist in a vacuum. "Margaret's world... alone." I have a family system, and turning 18 does not negate the very real presence of that. My mother is still an addict and me and my sister still need our mom."

Margaret overcomes her lack of trust in the child service system out of fear that her mother was spiraling down a dangerous path. She recalls the neglect she endured when she first entered the system as an eight year old girl and draws parallels to the non-responsiveness she is experiencing from her current case worker. She feels vulnerable and defenseless as she comes to the realization that her wellbeing and that of her sister depend on the willingness of one individual to care enough to act. The social worker refuses to drug test her mother and instead suggests that when Margaret comes of age she can move out on her own, suggesting that she leave her mother. Margaret emotionally pleads for assistance, reminding her caseworker that moving out would reduce the likeliness of her pursuing higher education. In addition, she reminds the caseworker that her life does not "exist in a vacuum." She is still responsible for the wellbeing of her mother and her younger sister.

Margaret's statement reflects the experiences of many youth in the foster care system. In 2004, while Black children comprised 16% of the child population in the United States, they accounted for nearly 34 % of the children in foster care. Additionally, research shows that the foster care system correlates with the criminalization of Black youth many of whom are in foster care in the first place because their parents have been targeted and incarcerated as a result of the war on drugs

(Alexander, 2011). These children are also more likely to end up in the juvenile justice system after experiencing exclusionary school discipline (NAACP, 2014). This statement also evokes the “superwoman syndrome” mentioned in an earlier testimony. In addition to working toward graduating from high school, pursuing a college education, taking care of her sister, and worrying about her mother’s relapse, Margaret must also navigate the racism and sexism of a system that has disregarded her. In her interactions with her social worker she experienced punishment in the form of perpetual neglect.

In the *Black Girls Matter* report several girls mentioned they were so uncomfortable with the security process required for school entry that they were discouraged from coming to school at all (Crenshaw, 2015). This process can violate personal space as it often involves passing through a metal detector wand, publicly disrobing, and having your body physically searched by an unfriendly and unfamiliar security guard. In Sharone’s testimony, she describes one particular instance that shows how Black girls are particularly vulnerable to the instruments of surveillance:

“In my school... we have to go through metal detectors to go into our school. And I had my hair wrapped and I went through the machine and like... it went off. Cause the metal in the hair pins. And they were like oh you got to take it off... and I was like why I gotta take my hair pins off I gotta wrap my hair. But she said I couldn’t go in because they were disturbing the metal detectors. And I refused to take them out and they called my house and I got in trouble. How are my hairpins harming anyone?”

Black girls’ distrust of authority figures is reinforced by their interactions with law enforcement on campus and in their communities. Because of their widespread distrust of the criminal justice system and associated figures (e.g. police officers,

probation officers, social workers), many girls feel victimized by the level of surveillance they are subjected to on their campuses. Based on Black girls previous interactions with police officers, they are sometimes reluctant to subject their lives to the scrutiny and control of police officers (Crenshaw, 1993). This broken relationship is even further damaged by the innumerable instances of police brutality that have targeted, victimized, and obliterated Black bodies. It also reflects the lack of justice Black people receive when entrusting the legal systems to act on their behalf. This is mentioned in PKay Johnson's interview when she discusses her experience with police officers:

“Women we get beat for no reason. I was raped when I was 9 years old. Nobody was there when I was raped. Nobody helped me. And when I went to the cops, they did nothing! The man is still running the streets. I don't see why the justice system has... you let rapist and you let people that hurt children out on the streets. A guy killed my brother when I was 15 about 7 years ago and they released him. They acquitted him after 5 years of being in jail.”

Numerous studies show that Black women and girls experience higher rates of sexual and intimate partner violence than their white counterparts (Morris, 2012; NAACP, 2014; Crenshaw, 2015). This disparity is said to reflect environmental vulnerabilities such as dangerous neighborhoods with a high volume of violence (NAACP, 2014). In addition to the emotional strain caused by her childhood rape and her brother's murder she must walk the streets knowing that the man who murdered her brother continues to walk free. Studies have found that Black girls seek alternative approaches to resolving conflict because of their distrust in formal legal systems (Jones, 2012; Crenshaw, 2015). Nikki Jones's *Between Good and Ghetto* illustrates how inner-city Black girls manage threats of personal violence without seeking assistance through the criminal justice system. Based on

observations of police interactions in their neighborhoods, the girls came to believe that the criminal justice system was ineffectual, and racist. For example, one girl was dissuaded from trusting the police for protection after she reported that another girl had struck her in the head with a brick and no legal action was taken. This neglect caused her to feel as though she would have to respond to future conflicts with violence. This is particularly problematic for Black girls because it challenges mainstream conceptions of femininity that suggests girls should not engage in physical altercations and in doing so they are subjected to exclusionary punishments, and incarceration.

## **Discussion**

In the case of Black girls who shared their testimonies at the “Breaking Silence: Hearing on Girls of Color,” race, gender, sexual expression, age, and a combination of other identities influenced their vulnerability to school disciplinary infractions and the juvenile justice system. These young women’s experiences were refined and even intensified by what I refer to as their *synchronous vulnerabilities*. In using the term synchronous vulnerabilities I am referring to the conflicts and challenges these young women must navigate in addition to existing in a marginalized and systematically oppressed body. Margaret’s comment regarding the gendered burden of caretaking that is often tacked onto the laundry list of women’s other obligations is especially important in understanding this concept. Across each narrative the girls mention a family member or loved one for whom they feel responsible. Margaret, along with scholars in feminist studies, term these multiple roles and responsibilities the “superwoman syndrome.” However, it is important to note that Margaret’s status as a woman, as a person of color, as a daughter of an undocumented mother, and as a niece of an incarcerated uncle complicates and racializes our traditional understanding of this complex. In order to more accurately reflect these experiences, the Superwoman Syndrome would have to be expanded to

encompass the gendered, economic, and racial vulnerabilities that girls of color must also navigate as they pursue their personal goals. Her story validates previous research studies that have found that youth in hard-pressed families, particularly those with younger siblings, are expected to fulfill adult responsibilities (Albelda & Dodson, 2012).

Victor Rios' youth control complex, which traditionally examines the ways that the school and criminal justice system criminalize Black and Latino boys, could be expanded to understand the gendered and racialized circumstances of girls (Rios, 2011). Black girls particularly are susceptible to additional levels of control and criminalization that silence their voices, criminalize their non-conforming behaviors, and hyper-sexualize their bodies. Despite the stressors of their preexisting vulnerabilities and other forms of oppression related to their multiple identities, these women are prohibited from expressing anger. School policies have policed gender in such a way that failure to conform to traditional gender standards operates as a form of symbolic criminalization. In these girls' stories, their symbolic criminalization is manifested when their teachers punish them for deviating from commonly accepted standards of femininity, discourage them from expressing their opinions, and stigmatize them as, "loud, aggressive, hypersexual, and defiant," all of which are labels that carry racist undertones that can be particularly damaging to the Black girls self-esteem. The school system, the foster care system, and the juvenile justice system's response and treatment of these girls perpetuated a cycle of distrust. Many of the girls who would have benefitted most from nurturing support and other services were instead punished. These interviews emphasize the importance of understanding Black girls' particular vulnerabilities to harassment, violence, and trauma and how these experiences negates their educational outcomes and exacerbate their susceptibility to the school-to-prison nexus.



## Conclusion

Excessively harsh school and law enforcement policies have become the norm for handling misconduct in urban schools. Scholars have found that punitive schooling policies facilitate a pipeline to prison that harms Black boys and girls. This trend is a reflection of structural racism and anti-Black violence that prematurely criminalize Black children. Through my research study I call attention to the perils of marginalizing and categorizing Black girls and boys under the umbrella Black youth since it allows researchers, philanthropists, community activists, policy makers, and even President Barack Obama to underestimate and even ignore the severity of experiences that are particular to Black girls. The current study utilized an intersectionality framework to better understand the complexities of Black girls experience based on their race, class, gender, and sexuality; and how these status identities structure vulnerabilities and challenges in the context of school discipline.

Most of the literature reviewed for the study focused on the persisting gender disparities in disciplinary infractions and in youth confinement. Some scholars investigated the underlying reasons that Black girls were more susceptible to punishment. Limited research has focused on the lived experiences of the Black girls who have been victimized and silenced by punitive policies, gender binaries, and anti-Black systems. Using footage retrieved from the AAPF and GGENYC, this study contributes to scholarship by expanding and challenging male-centric understandings of youth control paradigms and criminalization.

Through examining the racially coded and gendered ramifications of persistent school discipline among Black girls, this study finds that the relationship between Black girls' identities and their social circumstances correlates with their vulnerability to school punishment and carceral involvement. Through this study, I aim to contribute to the "Say Her Name" and "Black Girls Matter"

political movements that seek to shed light on anti-Black violence against Black girls and women by uplifting their narratives and experiences.

## **Recommendations**

In order to continue the struggle for educational equity and social justice in a more inclusive manner, I recommend the following changes to policy and practice and to research by scholars who are truly committed to dismantling punitive and criminalizing schooling environments. As evidenced by research, Black girls are particularly victimized by subjective infractions that affect them in criminalizing and critically harmful ways. This often reflects gendered and racial biases internalized by educators' and school administrators. Additional research should investigate the impact of gender stereotypes and implicit racial bias on the enforcement of exclusionary discipline. Scholars should also investigate how these policies are damaging the emotional and intellectual growth of Black girls to advance current knowledge, research, and advocacy.

Researchers and policymakers should establish definite parameters for behavioral infractions. This would reduce the number of suspensions for nonviolent offenses that often reflect cultural disconnect and bias. In addition, schools should universally adopt culturally relevant pedagogy and competency trainings to reduce the overrepresentation of Black students in school discipline. Educators should be equipped with specific skills and training to address the individual needs of marginalized students. It is critical to assess comprehensively the circumstances of each student using an intersectional framework. Intersectionality should also be incorporated in the language and framework of policy initiatives and restorative justice programs. In recent research, scholars have advanced our understanding of the particular components that should be included in gender-responsive programming for girls. These scholars have especially

highlighted the importance of responding to and supporting students who have survived trauma and other forms of violence. Future research should investigate how Black girls' could benefit from culturally relevant restorative programs that encompass and speak to their intersectional identities as both Black and female students.

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# **Habit Formation in Exercise: An Empirical Analysis of Exercise Habits**

**Jorge Dominguez**

Mentor: Dr. Heather Royer  
Department of Economics

## **Abstract**

*This paper analyzes habit formation in exercise by examining the interdependence between past, present, and current exercise levels. Using login record data from a gym located in the Midwest, along with Quality Controlled Local Climatological Data from the National Oceanic and Atmospheric Administration (NOAA), we estimate the effects of snowstorms on gym visits. The empirical results indicate that severe snowstorms have a causal effect on gym attendance. In light of these results, we use snowstorm variation as an instrument to estimate the dynamic relationship between past, present, and future exercise. We find that past exercise behaviors have an influence on present habits, implying that exercise routine interruptions may have a strong negative impact on habit formation, and that current exercise behaviors depend on anticipated future exercise. Our results imply rational habitual behavior in exercise and provide new insights for the study of habit formation.*

## Introduction

Sedentary lifestyles have become increasingly common among U.S. adults (Blumenkranz, Garber, and Goldhaber-Fiebert, 2010). According to the Centers for Disease Control and Prevention (CDC), nearly 80% of adults did not meet the aerobic and muscle strength guidelines as of 2016. These sedentary behaviors impact others through higher health insurance costs, lower worker productivity, and increased government spending on Medicare and Medicaid. As such, employers and policymakers have increasingly made use of financial incentives to improve wellness through exercise. Part of the success of such endeavors rests on the ability for incentives to change habits. While incentive programs have been shown to have strong positive short-run effects for problematic health behaviors, they have been less effective at generating long-lasting exercise habits, with the effects often disappearing once the incentive programs end (Royer et al. 2015). Therefore, understanding habit formation is of key importance for the design of incentive programs with longer-lasting effects.

In this paper, we analyze habit formation in exercise by examining the interdependence between past, present, and future exercise. We ask if exercise is habit-forming, in the sense that past exercise has a causal effect on current exercise. We also ask if individuals are forward-looking, in the sense that they make current exercise decisions depending on how much exercise they anticipate doing in the future. For example, an individual anticipating a busy work schedule tomorrow may choose to increase the amount of exercise today to make up for tomorrow's lost exercise. Our empirical strategy follows Becker, Grossman, and Murphy (1994) by considering the interaction between past and current exercise in a model with utility-maximizing individuals. The model is based on the assumption that past consumption of some goods influences their current consumption by affecting the marginal utility of current and future consumption.

In relation to exercise, we hypothesize that higher levels of past exercise stimulate current exercise by increasing the marginal utility of current exercise more than the current marginal cost of the exercise.

Using login record data from a gym located in the Midwest, along with Quality Controlled Local Climatological Data from the National Oceanic and Atmospheric Administration (NOAA), we test our predictions by considering the response of gym attendance to snowstorms. Given that the Midwest is a region affected by moderate to severe winter snowstorms that often cause road closures, making it difficult for gym members to get to the gym, we examine whether past and future snowstorms lower gym attendance. The empirical results indicate that snowstorms have a highly significant effect on current gym attendance. In light of these results, we use snowstorm variation as an instrumental variable to estimate the dynamic relationship between past, present, and future exercise. Our results indicate that past and future exercise behaviors have an influence on present habits, implying rational habitual behavior in exercise and illustrating the importance of the intertemporal linkages in exercise behavior.

## **Literature Review**

Our approach is motivated by a sizable and vibrant literature, beginning with Becker and Murphy (1988), aimed at studying rational addictive behavior. According to Becker and Murphy (1988), rational consumers maximize utility from stable preferences as they try to anticipate the future consequence of their actions. While the marginal utility of an addictive good in the current period depends on the consumption of the good in previous periods, rational consumers are farsighted, or forward-looking, in the sense that they anticipate the expected future consequences of their actions. In other words, current period consumption of an addictive good depends on past *and* future consumption levels of the good.

Although we tend to think of addictive goods in terms of substance abuse, people get addicted not only to alcohol, drugs, and cigarettes, but also to work, eating, music, television, their standard of living, other people, religion, and many other activities (Becker and Murphy 1988). While the degree of addictiveness varies from activity to activity and person to person, habits such as smoking, drinking, eating, and a host of others often meet two conditions required for addiction: reinforcement, in that the more you partake of the activity, the more you want to partake; and tolerance, in that the more that you partake of the activity, the lower your future utility given the amount of future consumption (Gruber and Koszegi, 2001).

While previous empirical studies analyzing tobacco consumption and voting behavior (Becker, Grossman, and Murphy 1994; Gruber and Koszegi 2001; Fujiwara, Meng, and Vogl 2015) have produced evidence supporting the theoretical framework of rational addiction proposed by Becker and Murphy (1988), fewer studies have focused on the implications of habit formation and rational addiction for exercise habits. Our research addresses this gap. Furthermore, our contribution to the literature on habit formation and rational behavior will inform business leaders and policy makers in dealing with rising healthcare costs by providing new insights for understanding whether incentive programs can be designed to change exercise habits and generate longer-lasting effects, which is an important open question in economics.

Following Becker and Murphy (1988), we explore the habitual nature of exercise by examining whether exercise exhibits adjacent complementarity. This happens if and only if past exercise influences current exercise by affecting the marginal utility of current and future exercise. In other words, we say there is adjacent complementarity in exercise if greater levels of past exercise stimulate current exercise by increasing the marginal utility of current exercise more than the present marginal cost. For example, engaging in exercise now may bring both monetary

expenses (gym memberships) and high effort costs, but investing in improving physical condition today may improve the future enjoyment of the exercise (feeling healthier). Thus, adjacent complementarity in exercise implies that the additional gains in utility from engaging in more exercise today will outweigh the overall costs of future exercise (e.g., giving up watching an hour of television, or incurring gym memberships costs) over time. Thus, studying exercise habits has important implications for understanding time-inconsistent preferences stemming from both present consumption and projection bias.

Faced with high initial costs to change habits and long-run future benefits, an individual with present-biased preferences, or high preferences for goods involving immediate payoffs, may procrastinate about making healthy changes in behavior. Similarly, an individual with projection bias, meaning that the individual exaggerates the extent to which his/her future tastes will resemble his/her current tastes, may not appreciate that the costs of exercise (effort) are likely to fall over time and therefore may underinvest in establishing an initially difficult habit, such as exercising regularly (Royer et al. 2015). This renders the standard exponential discounting model, in which people discount the future at a constant fraction when comparing any two consecutive time periods, impractical for modeling exercise behavior of individuals with both present consumption and projection-biased preferences. A more realistic approach for modeling such behavior is presented in DellaVigna (2007), which highlights that individuals with self-control problems stemming from present consumption bias make consumption choices based on non-standard, time-inconsistent preferences modeled by

$$(1) \quad U_t = u_t + \beta \delta u_{t+1} + \beta \delta^2 u_{t+2} + \beta \delta^3 u_{t+3} + \dots$$

In (1),  $\delta$  is the discount factor;  $u_t$  is the per-period utility of consumption;  $U_t$  gives the overall utility at time  $t$ ; and  $0 < \beta < 1$

shows discounting being steeper between the present and the immediate future, relative to discounting between any two periods in the distant future. This model captures the self-control problem driven by time-inconsistent preferences. The parameter  $\beta$  emphasizes the idea that, when evaluating outcomes between two time periods in the distant future, individuals are patient and have optimistic expectations about exercising. However, when comparing the present with the immediate future period, the discounting gets steeper, present bias becomes stronger, and individuals increase their consumption of leisure goods (e.g., watching TV) and delay painful tasks, such as exercise. Using this model, we can analyze how individuals make future consumption projections about investing in exercise. Individuals expect to consume an investment good in the future if

$$(2) \quad \beta\delta b_1 + \beta\delta^2 b_2 \geq 0$$

Or

$$(3) \quad b_1 + \delta b_2 \geq 0$$

In (2) & (3),  $b_1 < 0$  represents utility derived from the good in the first period (since the good requires effort in this period), and  $b_2 > 0$  represents the utility in the second period (since the good delivers a reward in this period), and  $\beta$  cancels out in (3), since comparison is taking place between two future periods and hence there is no present bias.

In the present period, however, the individual consumes an investment good if

$$(4) \quad b_1 + \beta\delta b_2 \geq 0$$

In (4),  $b_1$  is the utility derived from the good in the present period, and  $b_2$  is the utility in the following period. In contrast to the overly confident projected outcomes of the individual given by (3), the parameter  $\beta$  in (4) does not cancel out, since comparison is taking place between the present and subsequent period. This denotes the steep discounting element in (1), while highlighting the essence of present consumption bias. Furthermore, the model emphasizes that when comparing the desired consumption with the actual consumption of an investment good, the individual consumes too little investment. The model also reiterates another important point discussed in Royer et al. (2015). Individuals with projection bias may fail to realize that the cost of exercise,  $b_1$  in (4), is likely to fall when making comparisons between the present and subsequent periods in the future, while the reward of exercise,  $b_2$  in (4), is likely to rise due to adjacent complementarity discussed in Becker and Murphy (1988). Thus, the individual with projection bias fails to appreciate the diminishing marginal cost (e.g., pain) of exercise and the respective increasing marginal utility (e.g., reward) as time moves forward.

## **Theoretical Discussion**

Both projection bias and non-rational habitual behavior present a mechanism through which individuals may fail to make optimal intertemporal consumption decisions. Non-rational (myopic) individuals fail to have a consistent plan to maximize utility over time (Becker and Murphy 1988) and fail to anticipate the future consequences of their choices (current consumption is only affected by past consumption). In contrast, rational addicts are forward looking in that they make current consumption decisions considering both past and future consumption. A smoker, for example, would reduce consumption of cigarettes today in response to an anticipated future price increase in cigarettes. In relation to exercise, individuals anticipating higher exercise in a future period due to good weather may choose to increase their amount of current exercise. On the other hand, individuals

anticipating less exercise in a future period due to a snowstorm may choose to decrease their amount of current exercise. We hypothesize that individuals are rational when it comes to exercise decisions and thus experience a future anticipation effect on current exercise. To test this hypothesis, we first explore a purely myopic empirical framework, in the case in which individuals ignore the future when making exercise decisions and thus are purely backward looking (myopic). We then examine a rational-choice model of exercise behavior and compare our results against the purely myopic empirical strategy in order to determine if exercise behavior is habit-forming in a purely backward looking (myopic) sense, or if habit formation in exercise is rational.

## **Data and Empirical Strategy**

### *Gym Records and Climate Data*

We merge data on daily gym member login records at a gym located in the Midwest region of the U.S. with corresponding daily Quality Controlled Local Climatological Data (QCLCD), provided by the National Centers for Environmental Information (NCEI), on precipitation and snowfall (in total daily mm) based on the gym's geographical location. The data runs from 1999 through 2009. NCEI is the world's largest provider of weather and climate data and provides the most comprehensive hourly, daily, and monthly summaries for approximately 1600 U.S. locations. The weather dataset includes a nearly complete set of observations on snowfall for the years included in our study, with only two missing observations that we drop from our sample. We restrict our gym record observations on individual gym visits to a one-visit maximum per individual per day, since individuals sometimes choose to split their daily exercise routine into two time sessions per day and accounting for these extra visits will likely bias our estimates. For example, we may be interpreting a change from a one-hour workout session during a single gym visit to two half-hour workout sessions at two different times in the day, which may



result from an exercise schedule change due to changes in a person’s daily work schedule, as *more* exercise. Since our study focuses on using snowstorm variation as an instrument for studying only the intertemporal linkages between past, current, and future exercise patterns, and we are able to control for individual, year, and week fixed effects in our models, the data is suitable for the purpose of our study. The Midwest is also an ideal location for this analysis, given its winter storm susceptibility, with snowstorm magnitudes ranging from moderate to severe.

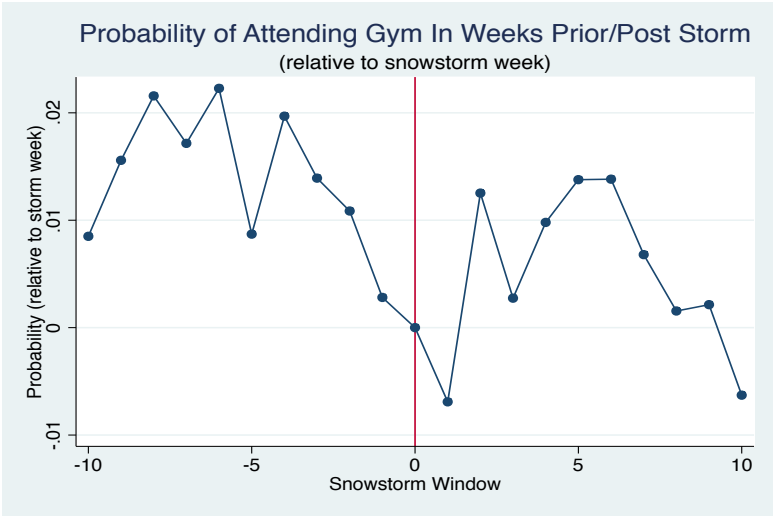
**Table 1** provides average daily snowfall by month in total millimeters. We use data at the weekly level to assess the effects of gym visits during a snowstorm week on gym visits in the subsequent week. Therefore, we drop observations from months with no snowstorms (May – September).

**Table 1 - Average Daily Snowfall By Month In Total Millimeters**

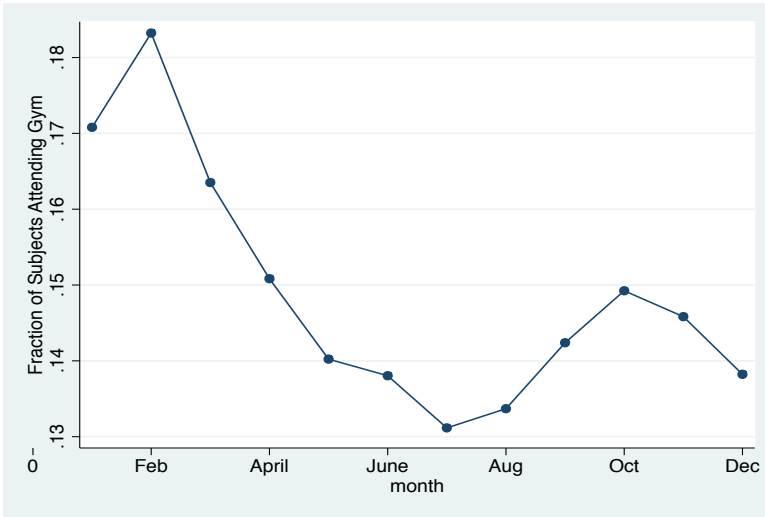
<i>Month</i>	<i>Mean</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>
January	17	29	0	231
February	15	32	0	277
March	10	24	0	274
April	2	8	0	216
May	0	0	0	0
June	0	0	0	0
July	0	0	0	0
August	0	0	0	0
September	0	0	0	0
October	0	0	0	25
November	3	9	0	191
December	13	33	0	259

**Figure 1** presents a time series of the probability of attending the gym each week around a 10-week snowstorm window, relative to the snowstorm week. **Figure 1** illustrates that gym attendance tends to fall one week before the snowstorm, and this declining effect persists even one week after the snowstorm.

**Figure 2** graphs the fraction of total gym members attending the gym per month. **Figure 2** shows a monthly trend in gym attendance. We see that gym visits are highest during January and then follow a declining pattern ending with the month of July and beginning again in the month of October. We account for these trends in our regression models by using week of the year fixed effects.



**Figure 1 – Probability of Attending Gym In Week Prior/Post Snowstorm**



**Figure 2 – Fraction of Total Gym Members Attending Gym By Month**

## Empirical Strategy and Results

### *Empirical Strategy*

To address our research question of whether exercise behavior is myopic, we follow Becker, Grossman, and Murphy (1994) and present an empirical strategy in which we analyze exercise in week  $t$  as a function of exercise in the previous week  $t - 1$ . We present a myopic model of habitual behavior, where past exercise stimulates current exercise, but individuals ignore the future when making exercise decisions. The model takes the following form:

$$(5) \quad \text{Visit}_{it} = \theta_0 + \theta_1 \text{Visit}_{i,t-1} + \tau_y + \pi_w + \varpi_i + \varepsilon_{it}$$

In (5), the independent variable  $\text{Visit}_{i,t-1}$  represents the total number of visits to the gym by an individual in week  $t - 1$ ,

and  $\tau_y, \pi_w, \varpi_i$  represent year, week and individuals fixed effects, respectively. Ordinary-least-squares estimation of equation (5) would lead to inconsistent estimates of the parameter of interest  $\theta_1$ . The independent variable  $Visit_{i,t-1}$  is likely to be endogenous, since unobservable individual characteristics and unobservable events affecting past gym visits may also affect current visits (omitted variables). Fortunately, a two-stage least squares estimator, using snowstorm variation in the years 1999-2009 as an instrument to identify  $\theta_1$ , can address this concern. We use an indicator variable *Snowstorm* in week  $t - 1$ , taking on a value of 1 if there is a snowstorm in week  $t - 1$  and 0 otherwise, as the instrument. We define a snowstorm in terms of total daily snowfall, with 100 mm of daily snowfall indicating a snowstorm. We are confident in the validity of the instrument, since past snowstorms only affect current exercise through past gym visits. Furthermore, we base instrument relevance on the difficulty of commuting to and from the gym during a heavy snowstorm, given that roadblocks and other physical road constraints are quite common during severe snowstorms. The first stage regression relates gym visits in week  $t - 1$  to snowstorms in week  $t - 1$ . The model takes the following form:

$$(6) \quad Visit_{i,t-1} = \psi_0 + \psi_1 Snowstorm_{i,t-1} + \kappa_y + \nu_w + \mu_i + \rho_{it}$$

In (6),  $\kappa_y, \nu_w$ , and  $\mu_i$  represent year, week, and individual fixed effects. To address our research question of whether individuals are rational, or forward-looking, in their exercise decisions, we again use insights from Becker, Grossman, and Murphy (1994) and present a rational-choice model of exercise behavior, in which individuals try to anticipate the future consequences of their exercise choices and thus current exercise also depends on future exercise expectations. The model takes the following form:

$$(7) \quad \text{Visit}_{it} = \beta_0 + \beta_1 \text{Visit}_{i,t-1} + \beta_2 \text{Visit}_{i,t+1} + \alpha_y + \varrho_w + \vartheta_i + w_{it}$$

Similar to equations (5), we instrument the independent variables  $\text{Visit}_{i,t-1}, \text{Visit}_{i,t+1}$  in (7) with snowstorm variation, this time using a one period lag and a one period lead of snowstorm as instruments. We use the Akaike information criteria (AIC) to decide on the amount of lags and leads to incorporate into our regressors in equations (5) and (7), which also corresponds to the amount of lags and leads that we include in our regressors from the first stage regressions outlined in equations (6), (8), and (9). The first stage regressions in the rational framework relate gym visits in week  $t - 1$  and week  $t + 1$  to snowstorms in week  $t - 1$  and week  $t + 1$ . The models take the following form:

$$(8) \quad \text{Visit}_{i,t-1} = \Psi_0 + \Psi_1 \text{Snowstorm}_{i,t-1} + \Psi_2 \text{Snowstorm}_{i,t+1} + \kappa_y + \ell_w + j_i + \varepsilon_{i,t-1}$$

$$(9) \quad \text{Visit}_{i,t+1} = Y_0 + Y_1 \text{Snowstorm}_{i,t-1} + Y_2 \text{Snowstorm}_{i,t+1} + \alpha_y + \lambda_w + \beth_i + \epsilon_{i,t+1}$$

In (8) and (9),  $\kappa_y, \ell_w, j_i, \alpha_y, \lambda_w, \beth_i$ , represent year, week, and individual fixed effects.

## Results

Similarly to Becker, Grossman, and Murphy (1994), we begin our empirical estimation with the myopic model in equation (5). This model implies that the coefficient on instrumented future exercise  $\beta_2$  in equation (7) should be zero, since individuals are purely backward looking in their current exercise decisions and future snowstorms and exercise changes have no impact on current exercise. We relax this assumption in the rational-choice model by examining whether anticipated future exercise is a significant predictor of current exercise, meaning that individuals are rational, or forward looking, in their present exercise decisions. We begin

by performing two-stage-least-squares (TSLS) estimation using the myopic regression framework presented in equation (5), and then perform two-stage least-squares estimation using the rational exercise, or forward-looking, approach outlined in equation (7) to determine whether the respective parameter estimate for  $\beta_2$  is statistically different from zero.

**Table 2** presents our TSLS estimates for the first stage regression in the myopic exercise behavior model. The independent variables consist of past snowstorms ( $Snowstorm_{t-1}$ ) plus the other exogenous explanatory variables in the model. The dependent variable represents past gym visits ( $Visit_{t-1}$ ). Columns (1) and (2) in **Table 2** present the results for all gym members, while columns (3) – (4) present results for regular exercisers (subjects attending gym at least once/week for the past month), and columns (5) – (6) present results for irregular exercisers (subjects not attending gym at least once/week for the past month). We analyze heterogeneity among regular and irregular exercisers because we expect these groups to behave differently. Thus, we are interested in seeing how sensitive these different groups are to exercise routine interruptions that can arise through shocks in a person’s environment, such as snowstorms. As a robustness check for our coefficient estimates in **Table 2**, we include two regressions for each category of exerciser, one including only individual fixed effects and the other adding on week and year fixed effects. For the most part, we see that our coefficient estimates are sensitive to the inclusion of week and year fixed effects. Our coefficient estimates in **Table 2** provide a fair indication of instrument relevance, with most coefficient estimates being significant at the 1 percent level. These results are also intuitively pleasing, since they indicate that past snowstorms have a negative effect on past gym visits (for the models controlling for week, year, and individual fixed effects).

**Table 2 – Two Stage Least Squares Regression Results (first stage)**  
**Effect of Past Snowstorms on Past Gym Visits (myopic framework)**

Dependent variable *Visit* is total number of gym visits in a given week. Independent variable *Snowstorm* is 0/1 indicator=1 if there is a snowstorm in a given week and 0 otherwise

Independent Variables	First Stage Regression Estimates					
	Overall		Regulars		Irregulars	
	(1)	(2)	(3)	(4)	(5)	(6)
	<i>Visit<sub>t-1</sub></i>	<i>Visit<sub>t-1</sub></i>	<i>Visit<sub>t-1</sub></i>	<i>Visit<sub>t-1</sub></i>	<i>Visit<sub>t-1</sub></i>	<i>Visit<sub>t-1</sub></i>
<i>Snowstorm<sub>t-1</sub></i>	0.003 (0.005)	-0.037*** (0.004)	0.033*** (0.009)	-0.041*** (0.009)	-0.013*** (0.004)	-0.029*** (0.004)
Individual Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Week Fixed Effects	No	Yes	No	Yes	No	Yes
Year Fixed Effects	No	Yes	No	Yes	No	Yes
Observations	486,808	486,808	130,080	130,080	356,728	356,728
R-squared	0.380	0.389	0.326	0.335	0.195	0.205

Robust standard errors clustered by individual in parentheses. Columns (1)-(6) give two-stage least squares estimates from the first stage regressions in the myopic framework. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

**Table 3** presents our TSLS estimates for the second stage regression in the myopic framework, with *Visit<sub>t-1</sub>* treated as endogenous. The instruments used in **Table 3** consist of the past snowstorms (*Snowstorm<sub>t-1</sub>*) variable from the first stage plus the other exogenous explanatory variables in the model. Similar to Table 2, columns (1) and (2) in **Table 3** present the results for all gym members, while columns (3) – (4) present results for regular exercisers, and columns (5) – (6) present results for irregular exercisers. According to our parameter estimates of the myopic models presented in **Table 3**, the positive past exercise coefficients are consistent with our hypothesis that exercise is habit forming, in the sense that increases in past exercise have a positive effect on current exercise. However, none of the results are highly significant, with only the estimate in column 2 being significant at the 10 percent level.

**Table 3 – Two Stage Least Squares Regression Results (second stage)**  
**Effect of Past Gym Visits on Current Gym Visits (myopic framework)**

<i>Dependent variable Visit is total number of gym visits in a given week</i>						
Independent Variables	Second Stage Regression Estimates					
	Overall		Regulars		Irregulars	
	(1)	(2)	(3)	(4)	(5)	(6)
	<i>Visit<sub>t</sub></i>	<i>Visit<sub>t</sub></i>	<i>Visit<sub>t</sub></i>	<i>Visit<sub>t</sub></i>	<i>Visit<sub>t</sub></i>	<i>Visit<sub>t</sub></i>
<i>Visit<sub>t-1</sub></i>	0.104 (0.148)	0.223* (0.127)	0.102 (0.214)	0.104 (0.196)	0.229 (0.187)	0.253 (0.166)
Individual Fixed Effects	No	Yes	No	Yes	No	Yes
Week Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	486,808	486,808	130,080	130,080	356,728	356,728
R-squared	0.020	0.392	0.019	0.323	0.020	0.289

Noes: Robust standard errors clustered by individual in parentheses. Columns (1)-(6) give two-stage-least-squares (2SLS) estimates with *visit<sub>t-1</sub>* treated as endogenous. The instruments in columns (1)-(6) consists of a one period lag of snowstorm plus the other explanatory variables in the model.

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

**Table 4** presents our TSLS estimates for the first stage regression in the rational choice model for the effect of snowstorms on gym visits in the previous period, outlined in equation (8). The dependent variable (*Visit<sub>t-1</sub>*) represents gym visits in the previous period. The independent variables of interest consist of past and future snowstorms (*Snowstorm<sub>t-1</sub>* and *Snowstorms<sub>t+1</sub>*). We conduct a test of joint significance (F test) to test the hypothesis that the regressors corresponding to columns (1)-(6) have no joint explanatory power. In each case, our F statistic is well over 10, providing a fair indication of instrument relevance. These results are also intuitively pleasing, since they indicate that the presence of past snowstorm has a negative effect on past gym visits (for the models controlling for week, year, and individual fixed effects).



**Table 4 – Two Stage Least Squares Regression Results (first stage)**  
**Effect of Snowstorms on Past Gym Visits (rational framework)**

Dependent variable *Visit* is total number of gym visits in a given week. Independent variable *Snowstorm* is 0/1 indicator=1 if there is a snowstorm in a given week and 0 otherwise

Independent Variables	First Stage Regression Estimates					
	Overall		Regulars		Irregulars	
	(1)	(2)	(3)	(4)	(5)	(6)
	$Visit_{t-1}$	$Visit_{t-1}$	$Visit_{t-1}$	$Visit_{t-1}$	$Visit_{t-1}$	$Visit_{t-1}$
$Snowstorm_{t-1}$	0.005	-0.033***	0.034***	-0.040***	-0.012***	-0.027***
$Snowstorm_{t+1}$	0.039***	0.020***	0.027***	0.006	0.017***	0.005
Individual Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Week Fixed Effects	No	Yes	No	Yes	No	Yes
Year Fixed Effects	No	Yes	No	Yes	No	Yes
Observations	486,808	486,808	130,080	130,080	356,728	356,728
R-squared	0.380	0.389	0.325	0.334	0.195	0.206

Columns (1)-(6) give two-stage least squares estimates from the first stage regressions in the rational framework. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 5** presents TSLS estimates for the first stage regression in the rational choice model for the effects of snowstorms on gym visits in the future period, only this time the dependent variable ( $Visit_{t+1}$ ) represents gym visits in the future period. Similarly to **Table 4**, the independent variables of interest consist of past and future snowstorms ( $Snowstorm_{t-1}$  and  $Snowstorm_{t+1}$ ). We conduct a test of joint significance (F test) to test the hypothesis that the regressors corresponding to columns (1)-(6) have no joint explanatory power. In each case, our F statistic is well over 10, once again providing a fair indication of instrument relevance.

**Table 5 – Two Stage Least Squares Regression Results (first stage)**  
**Effect of Snowstorms on Future Gym Visits (rational framework)**

Dependent variable *Visit* is total number of gym visits in a given week. Independent variable *Snowstorm* is 0/1 indicator=1 if there is a snowstorm in a given week and 0 otherwise

Independent Variables	First Stage Regression Estimates					
	Overall		Regulars		Irregulars	
	(1)	(2)	(3)	(4)	(5)	(6)
	<i>Visit<sub>t+1</sub></i>	<i>Visit<sub>t+1</sub></i>	<i>Visit<sub>t+1</sub></i>	<i>Visit<sub>t+1</sub></i>	<i>Visit<sub>t+1</sub></i>	<i>Visit<sub>t+1</sub></i>
<i>Snowstorm<sub>t-1</sub></i>	0.068*** (0.005)	0.022*** (0.004)	0.075*** (0.011)	0.038*** (0.010)	0.062*** (0.005)	0.024*** (0.005)
<i>Snowstorm<sub>t+1</sub></i>	0.013*** (0.005)	-0.026 (0.005)	0.012*** (0.012)	-0.052*** (0.011)	-0.005*** (0.004)	-0.031*** (0.005)
Individual Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Week Fixed Effects	No	Yes	No	Yes	No	Yes
Year Fixed Effects	No	Yes	No	Yes	No	Yes
Observations	486,808	486,808	130,080	130,080	356,728	356,728
R-squared	0.369	0.389	0.310	0.323	0.287	0.297

Robust standard errors clustered by individual in parentheses. Columns (1)-(6) give two-stage least squares estimates from the first stage regressions in the rational framework.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 6** presents our TLS estimates for the second stage regression in the rational framework, with the independent variables *Visit<sub>t-1</sub>* and *Visit<sub>t+1</sub>* (representing past and future gym visits) treated as endogenous. The instruments used in **Table 6** consist of the past and future snowstorms (*Snowstorm<sub>t-1</sub>* and *Snowstorm<sub>t+1</sub>*) variables from the first stages (**Tables 4 and 5**) plus the other exogenous explanatory variables in the model. The dependent variable *Visit<sub>t</sub>* represents gym visits in the current period. Columns (1) and (2) present the results for all gym members, while columns (3) – (4) present results for regular exercisers, and columns (5) – (6) present results for irregular exercisers. While most of the coefficient estimates in **Table 6** are highly significant, they are also sensitive to the inclusion of week

and year fixed effects. This may indicate that further inspection of model specification is needed.

**Table 6 – Two Stage Least Squares Regression Results (second stage)  
Effect of Past/Future Gym Visits on Current Visits (rational framework)**

Dependent variable <i>Visit</i> is total number of gym visits in a given week						
Independent Variables	First Stage Regression Estimates					
	Overall		Regulars		Irregulars	
	(1)	(2)	(3)	(4)	(5)	(6)
	<i>Visit<sub>t</sub></i>	<i>Visit<sub>t</sub></i>	<i>Visit<sub>t</sub></i>	<i>Visit<sub>t</sub></i>	<i>Visit<sub>t</sub></i>	<i>Visit<sub>t</sub></i>
<i>Visit<sub>t-1</sub></i>	0.428*** (0.022)	1.162*** (0.399)	-0.094*** (0.483)	1.595*** (0.409)	0.706*** (0.296)	0.617*** (0.293)
<i>Visit<sub>t+1</sub></i>	0.588*** (0.021)	1.178*** (0.457)	0.770*** (0.256)	1.091*** (0.251)	0.632*** (0.109)	0.403*** (0.197)
Individual Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Week Fixed Effects	No	Yes	No	Yes	No	Yes
Year Fixed Effects	No	Yes	No	Yes	No	Yes
Observations	486,808	486,808	130,080	130,080	356,728	356,728
R-squared	0.390	0.392	0.309	0.321	0.270	0.280

Robust standard errors clustered by individual in parentheses. Columns (1)-(6) give two-stage least squares estimates from the second stage regressions in the rational framework.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## Conclusions

Previous research on habit formation has centered around studying the effects of past consumption of an addictive or habitual good on current consumption of the good, making assumptions of myopic consumption behavior. While rational choice models of forward-looking consumption behavior, following Becker and Murphy (1994), have also been present in the literature on habit formation, few have concentrated on the implications of rational addiction for exercise behavior. We address this gap by examining

whether rational addiction models can be used to predict exercise habits. We ask if exercise is habit-forming, in the sense that past exercise has an effect on current exercise, but we take this analysis a step further and ask if individuals are forward-looking when making exercise decisions, meaning that their current exercise decisions are influenced by how much exercise they anticipate to do in the future. We test whether individuals are purely myopic by identifying the effects of future exercise on current exercise using a rational-choice model of exercise behavior.

Our results indicate that exercise is habit-forming; with an increase in gym attendance by 1 visit in the current week translating to an increase of 1.16 visits to the gym in the following week. Furthermore, anticipating an increase in gym attendance by 1 visit in the following week leads to an increase in gym visits in the current week of 1.18 visits. This implies rational habitual behavior in exercise, with past and future changes in exercise significantly impacting current exercise. This evidence is inconsistent with the hypothesis that agents are myopic in regards to exercise decisions. Our contribution to the literature on habit formation and rational behavior in exercise will provide new insights for understanding how incentive programs can be designed to change exercise habits and generate longer-lasting effects. One caveat from our results is the inconsistency that we found in backward-looking behavior (past gym visits affecting current visits) between our purely myopic model and our rational exercise behavior model. Further research is needed to address this concern.

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# **The Effects of Residential Mobility and Neighborhood Context on Released Prisoners' Recidivism: A Review of Evidence**

**Jacqueline Lepe**

University of Maryland, College Park Mentor: Dr. Kiminori  
Nakamura

Department of Criminology and Criminal Justice

## **Abstract**

*The unprecedented growth of the U.S. prison population has been accompanied by a massive scale of prisoner reentry, with over 600,000 prisoners released every year. Nearly two thirds of these released prisoners are rearrested and a half of them return to prison within three years. The high rates of recidivism have prompted many scholars to examine possible factors that may influence former prisoners' likelihood to recidivate. Prisoners' individual characteristics that exist even prior to incarceration, such as poor education, substance abuse, and mental illness, as well as challenges associated with life after prison, such as difficulties securing employment and housing, can influence recidivism. The current study reviews literature pertinent to understanding the role of residential mobility in released prisoners' recidivism. While it has been documented that reentering prisoners often experience residential instability, little research attention has been paid to its effects on recidivism. This review also examines the role of neighborhood contexts in potentially shaping the impact of residential mobility on recidivism. Prior studies have shown that recidivism is more likely in certain neighborhoods, and neighborhood contexts can also moderate the effects of residential movements, as well as possibly influence the causes of movements themselves. This study concludes by identifying gaps in the literature and provides promising directions for future research.*

## **Introduction**

### ***A Description of Returning Prisoners and Challenges to Their Reentry Process***

The growth of the prison population in the U.S. has reached unprecedented levels over the past decades, beginning in the mid-1970s, and resulting in a population of 2.22 million people in custody in 2013 (Glaze and Kaeble 2014). This enormous rise in incarceration has been accompanied by a large number of released offenders reentering society annually, with over 600,000 prisoners released from U.S. prisons every year (Carson and Golinelli 2014). However, many of these former prisoners ultimately cycle back into prison within a few years of release, with every additional incarceration cycle increasing their risk of reoffending in the future. According to Durose et. al. (2014), 76.6 percent of released prisoners in 2005 were re-incarcerated for a new crime within five years, and 67.8 percent were rearrested for a new crime within three years. These figures underscore the urgency to understand what leads former prisoners to reoffend and to be re-incarcerated, and determine the factors that may contribute to this reentry process by examining the specific challenges, trajectories, and circumstances they face.

Many scholars argue that prisoner pre-incarceration characteristics, such as poor education and employment histories, and substance abuse problems, are significant predictors of recidivism (Baer et. al. 2006, Visser and Travis 2003, Grunwald et. al. 2010, Stahler et. al. 2013, Mears et. al. 2008, Travis and Western 2014). Nonetheless, the stigma of incarceration histories also contributes to former prisoners' post-prison difficulties by further disconnecting released inmates from the labor market for long periods of time, and constantly exposing them to criminogenic learning while incarcerated. It is important to acknowledge that for many released prisoners today, it is highly likely that they have been incarcerated several times before, and



are coping with some form of mental illness, chronic substance abuse condition, and/or an infectious disease, all of which have been found to be predictive of recidivism (Baer et. al. 2006, Gendreau et. al. 1996, Petersilia 2003, Mears et. al. 2008, Travis and Western 2014). However, these individual characteristics are not the only challenges that prisoners face upon release. Former prisoners are often confronted with barriers to finding and securing some of their most basic needs, such as food, housing, and employment (Harding et. al. 2013, Visser et. al. 2008).

Difficulties in finding housing and employment are important factors that contribute to ex-offenders' high residential mobility patterns after prison. Recent literature suggests that residential mobility, and the different living situations of former prisoners, may be associated with recidivism as each move disrupts the social relationships they have within a community. This growing body of literature is largely based on social control theories suggesting that former prisoners' high residential mobility weakens the amount of informal social control—or the encouragement to abide by norms and laws—ex-offenders receive from those with whom they are close, resulting in higher risks of crime. Likewise, scholarly literature applying neighborhood-based theories also suggests that the neighborhoods in which former prisoners reside produce high rates of delinquency and crime, as a consequence of their adverse characteristics of poverty, high residential turnover, racial composition, and other factors. Existing research illustrates that most released offenders are not returning to their neighborhoods of origin, meaning they must adapt to new environments upon release. Research also demonstrates that released prisoners return to a small number of cities in each state, often characterized by social and economic disadvantage (Baer et. al. 2006, Petersilia 2003, Harding et. al. 2013, Clear 2007). Thus, although former prisoners are moving to different neighborhoods upon release, they are still moving to similar adverse environments. It has long been established that ex-offenders' high residential mobility and neighborhood context play important roles

in influencing their criminogenic behavior. Nonetheless, it is still not clear whether mobility itself or the neighborhoods into which former prisoners move, or both, *lead* to recidivism.

It is important to continue to examine how released prisoners transition from incarceration to freedom and determine the specific factors that influence them to recidivate. This knowledge is critical to any efforts to alleviate the problem of mass re-incarceration and to better support former prisoners by increasing their chances of successful reintegration. Such findings would have significant financial implications for state and federal prisons that would ultimately lead to large financial reductions, and make those funds available to support offenders in establishing a life outside of the detrimental prison cycle.

The objective of this bibliographic essay is to examine the extent to which high residential mobility patterns of former prisoners, and the neighborhood contexts in which they ultimately reside, cause or lead to their rates of recidivism and re-incarceration. It begins by discussing the existing literature focusing on correlations between residential mobility and delinquency, using the theory of social control, followed by literature focusing on residential mobility and recidivism. This essay will then introduce the theory of social disorganization, and the existing literature on the correlations of neighborhood contexts and delinquency, followed by literature on neighborhood contexts' associations to recidivism.

## **Literature Review**

### ***Residential Mobility and Delinquency***

Scholars have examined the association between moving from one neighborhood to another, with the attendant consequence of changing schools and juvenile delinquency. Research has documented the many reasons why families may seek to relocate:

lacking satisfaction with the neighborhoods in which they reside (Lee et. al. 1994), better job opportunities elsewhere (Vandersmissen et. al. 2009), or an effort to escape the adverse environments of gangs and violence they currently face for the sake of their children (Ludwig et. al. 2001). Nonetheless, the event of moving is associated with detrimental effects on adolescents' academic and personal well-being, and to an increase in delinquent behavior (Haynie and South 2005). Scholars have theorized about the link between detrimental effects and social control, suggesting that delinquency occurs when individuals are not closely monitored and attached to peers and society. Hirschi's (1969) social control theory, for example, suggests four main elements are necessary for an individual to maintain conventional bonds to society and internalize norms: 1) attachment to others, thereby holding individuals accountable to moral restraints; 2) commitment to a conventional life and conformity; 3) involvement in conventional activities; and 4) a strong belief in obeying the rules of society. According to Hirschi (1969), these four elements promote moral behavior by increasing the commitment to and attachment of an individual to conventional society, and to the expectations of others to behave according to established norms. Drawing from this theoretical framework, previous research posits that mobility is associated with juvenile delinquency due to its disruption of a family's and juveniles' attachment to community, peers and institutions, and the deterioration of informal social control. Moving often results in breaking the social bonds that parents have established with their neighbors, their children's friends and their parents, as well as to the institutions and organizations within the community, weakening the power of social control they and the community have over their children (Coleman 1988).

Haynie et. al.'s (2006) study examining the relationship between adolescent residential mobility and the academic deviant behaviors of their friendship networks, found that residentially mobile adolescents often belong to friendship networks with

weaker academic performance and academic expectations, less school engagement, and higher rates of delinquency than non-mobile adolescents. Long-term residents and their peers are more involved in extracurricular activities than their short-term counterparts. Mobile juveniles have a harder time establishing friendship networks with high-achieving, non-delinquent, and prosocial peers, because such peers are not as welcoming to newcomers as their delinquent counterparts. Delinquent peers and friendship networks are also more encouraging of delinquent behavior, increasing the frequency with which residentially mobile juveniles engage in crime. Residential mobility, thus, is detrimental to juveniles' ability to remain in friendship networks of academic excellence, their ability to become engaged with and attached to their schools and extracurricular activities it has to offer, and to steer away from deviant behavior (Haynie et. al. 2006).

Another study by Haynie and South (2005) examined the impact of mobility on adolescent violence using data from the National Longitudinal Study of Adolescent Health. The data show that mobile adolescents exhibit higher rates of violent delinquency—a 25 percent increase—compared to their non-mobile counterparts, possibly due to the following factors: residentially mobile adolescents have lower quality relationships with their parents, lower levels of parent-child social capital, and of parental availability, indicating that the lack of social control that parents exert over their children plays a significant role in adolescents' deviant behavior (Haynie and South 2005). Haynie and South (2005) also affirm that the behavioral composition of the adolescents' friendship networks best explains the impact that residential mobility has on adolescent violent behavior. Both of these studies point to the association between the lack of informal social control parents have over their children after a recent residential move and their children's delinquency. Moving to a new neighborhood weakens the ability of parents to supervise adolescent behavior, perhaps partially due to financial difficulties

requiring them to work longer hours, but also possibly due to the absence of the informal social control that neighbors and other community members close to the family have over their children. With diminished informal social control, adolescents have more freedom to engage in delinquent activities with little supervision, and are especially vulnerable to such behavior while finding a group of friends immediately after the move.

As Porter and Vogel (2013) suggest, although mobility is a significant correlate of delinquency in juveniles, delinquency may be better explained by selection bias, or the decision to move as a consequence of background characteristics of juveniles—such as parental socioeconomic status, education, mobility intentions, and family structure—that increase the likelihood of moving *and* delinquency. Porter and Vogel (2013) found no significant differences in juvenile delinquency and violence between mobile and non-mobile adolescents, after comparing movers and non-movers with equal propensities to move. What they did determine was that mobile adolescents tend to have unmarried parents, be exposed to violence, live in unsafe and disorderly neighborhoods, and experience financial difficulties more frequently than non-mobile adolescents (Porter and Vogel 2013). These background characteristics are more predictive of mobility by increasing the adverse experiences and difficulties adolescents and their family face that may prompt them to move in the future. These characteristics also increase the likelihood that adolescents engage in deviant behavior merely by growing up in a socioeconomically and disadvantaged neighborhood, whether they move or not.

Such findings indicate that the associations between mobility and delinquency may be less attributable to moving itself and more to the background characteristics of juveniles, and the adverse circumstances their families endure that propel them to move (Porter and Vogel 2013). This is consistent with previous research examining the influence of adverse neighborhood characteristics on delinquency, showing that juveniles living in

disorderly neighborhoods and adverse environments are at an increased risk of engaging in delinquency. Porter and Vogel, however, did not measure the amount of informal social control that adolescents received from their parents or the neighborhood and its institutions before and after moving, an important factor that prior studies conclude is associated with juvenile delinquency. Nonetheless, it does point to the importance of neighborhood environments in determining adolescent exposure to violence and other risk factors that deserve attention, a topic that will be fully addressed in a later section.

### ***Residential Mobility and Recidivism***

A smaller body of recent literature has examined the possible effects of residential mobility on recidivism rates in former prisoners in an effort to understand how constant relocation may influence their criminogenic behavior. Similar to the social control theory of social bonds introduced in the section above, Sampson and Laub (1993) suggest that strong and close emotional ties adults have with a spouse and others—such as employers—as a result of the life course (the different factors in each phase of life that occupy an individual's time, such as getting a job), are especially important for avoiding recidivism. Sampson and Laub (1993) argue that the social capital former prisoners obtain from investing in these relationships—interpersonal relations and institutional linkages—compel ex-offenders to abide by societal institutions and expectations, and thus avoid criminogenic behavior. These relationships must, however, be based on a strong interdependent system of obligation and restraint, in which social capital is reciprocal in order for former prisoners to believe that the risk of losing such relations is greater than the motivation to engage in criminal activities (Sampson and Laub 1993). The following two studies examined the different trajectories of returning prisoners living with different individuals and their varying quality of relationships, as well as the effects of separating from deviant environments and social ties for returning prisoners.

Former prisoners' experiences are characterized by high residential and economic instability due to their lack of financial resources, the housing barriers they face in both the public and private housing markets, and the stigma they carry from their incarceration histories, all of which make it substantially harder for them to secure housing and employment. Researchers have suggested that these difficulties may contribute to their risk of recidivism. For example, Steiner et. al. (2015) examined the effects of former prisoners' residential situations and mobility on recidivism—defined as rearrest for either a parole violation or a new felony offense—and found that living with a spouse, parent, or other relative decreased the risk of recidivism in former prisoners by 48 percent, 17 percent, and 28 percent, respectively. On the other hand, living with a boyfriend or girlfriend was associated with an increased risk of recidivism of 82 percent (Steiner et. al. 2015). In addition, offenders who moved more frequently were also more likely to recidivate, the risk increasing by 125 percent with every move (Steiner et. al. 2015). These results suggest that the quality of the relationships ex-offenders have with those they live with immediately after prison, is important in predicting whether they succeed at maintaining desistance. It may be possible that strong relationships with close individuals have greater potential to control former prisoners' criminogenic behavior upon release, and in pressuring offenders to establish a more conventional life as responsible husbands, fathers, and members of a family. This may be due to the ability of these specific individuals to exert greater informal social control and supervision of former prisoners' activities, especially upon release.

With a similar focus, Kirk (2009) examined whether migration out of pre-incarceration neighborhoods would lead to lower levels of recidivism. This was achieved by focusing on a cohort of prisoners released after Hurricane Katrina in New Orleans, Louisiana, whose residences of origin were damaged by the storm, and thus were forced to migrate elsewhere. The study was one of the first to examine the effects of residential mobility

on recidivism while minimizing the problem of selection bias. It compared the cohort of those released post-Katrina to two pre-Katrina cohorts who had the option of returning to their former residences. When given the option, former prisoners were more likely to return to their neighborhoods of origin. However, those who moved to a different neighborhood in the post-Katrina cohort were less likely to be re-incarcerated within one year of release, regardless of their number of prior incarcerations (Kirk 2009). Married released offenders were also less likely to reoffend and to be re-incarcerated, as were those who returned to areas with higher rental markets. These findings suggest that moving away from places of origin may offer some benefits to former prisoners by providing a change of environment with a new beginning, away from delinquent peers and criminogenic temptations (Kirk 2009). Marriage and areas with higher rents may also provide more informal social control exerted by those with whom former prisoners live with, and diminish criminal ties, better preventing former prisoners from recidivating.

Although the literature on residential mobility of former prisoners and its effects on recidivism is quite limited, these two studies (Kirk 2009; Steiner et.al. 2015) demonstrate the significance of both informal social control at the individual level and of quality relationships in helping former prisoners desist and reestablish a conventional lifestyle upon and after release. In addition to residential mobility, however, another factor that has received a considerable amount of attention in the research literature is neighborhood context. Researchers have suggested that disadvantaged neighborhoods contribute to the high rates of juvenile delinquency and recidivism due to their variety of adverse characteristics; they point to the possibility that the link between residential mobility, at the individual-level, and the neighborhoods to which former prisoners often relocate, may be significantly correlated to recidivism.



## *Neighborhood Effects and Delinquency*

Theories based on social ecology and the influence of neighborhood context on crime and delinquency argue that the deterioration of social organization helps explain why certain neighborhoods produce a great deal of crime. Shaw and McKay's (1969) social disorganization theory suggests that disadvantaged neighborhoods produce higher rates of crime due to high poverty, high population turnover, and ethnic heterogeneity, all of which prevent community members from building strong and trusting relationships. These close relationships are important for exerting informal social control and policing crime by allowing community residents to collectively establish, govern, and police norms and expectations of one another. In this way, close relationships help to ensure safety with minimal criminal activity.

Similarly, Sampson and Groves (1989) argue that in addition to these characteristics, marital and family disruption, along with urbanization, may also lead to social disorganization that consequently increases crime rates. In their study examining 238 British neighborhoods, the authors relied on data from the British Crime Survey—a nationwide survey of England and Wales—to measure social disorganization through the variables of low socioeconomic status, local friendship networks, heterogeneity, mobility, family and marital disruption, and urbanization. Low socioeconomic status neighborhoods characterized by sparse friendship networks and low organizational participation had higher rates of juvenile delinquency (Sampson and Groves 1989). Communities with high levels of family disruption and urbanization, as well as ethnic heterogeneity, lacked the ability to control juvenile delinquency, resulting in higher levels of mugging, robbery, and stranger victimization (Sampson and Groves 1989). These results suggest that community members must create and belong to strong friendship networks of trust, and show a willingness to work together to create a safe environment, in order for neighborhoods to control delinquency most effectively.

In addition, two-parent families are also equally important. A larger number of two-parent families in a neighborhood increases the number of adults participating in controlling crime. Community members are more able to supervise not only their own children but other juveniles in the neighborhood, allowing for closer surveillance of the community's activities.

Much of recent empirical research based on social disorganization theory has also found these neighborhood characteristics to be highly correlated to delinquency in urban juveniles by granting them the freedom to engage in delinquent activities with minimal supervision, while simultaneously exposing them to a criminal culture. One of the most notable experiments assessing the importance of neighborhood context to delinquency is the Moving to Opportunity for Fair Housing (MTO), sponsored by the United States Department of Housing and Urban Development in the 1990s. The experiment is one of the few that overcomes the problem of selection bias by randomly assigning families into different mobility groups. The MTO experiment executed a voluntary housing program that randomly assigned participating families, living in high-poverty public housing in Baltimore, Boston, Chicago, Los Angeles, and New York City, to three different groups: 1) the experimental group, families who received housing subsidies to move to low-poverty census tracts (poverty rates under 10 percent); 2) the Section 8-only comparison group, families who received housing subsidies with no relocation constraints; and 3) the control group, families who received no housing subsidies or other forms of assistance (Ludwig et. al. 2001). The many studies reporting on the experiment's results have found that neighborhood context does significantly influence delinquent behavior in adolescents.

For example, Kling et. al. (2005) found that for those in the experimental group, moving to lower poverty neighborhoods led to significantly fewer violent and property crime arrests for young women, initially and in the future. Young men, on the other hand,

initially exhibited fewer violent crime arrests, yet property offenses increased throughout the first few years and continued after the move (Kling et. al. 2005). Thus, moving to areas characterized by reduced economic residential segregation, improved social opportunities, and educational access may be more beneficial for young women than young men. In addition, despite the fact that families in both the experimental and the Section 8-only groups were given the opportunity to move to lower-poverty neighborhoods, the experimental group experienced the biggest neighborhood socioeconomic change (Sciandra et. al. 2013). While all families originated in neighborhoods with over a 50 percent poverty rate, those in the experimental group moved to neighborhoods with an average poverty rate of 15 percent as a result of MTO (Sciandra et. al. 2013). Additionally, the experimental and Section 8-only groups experienced a reduction in violent-crime arrests compared to the control group, with both groups equaling half of the control group's (Ludwig et. al. 2001). These results suggest that although moving to lower poverty neighborhoods may initially increase property-crime arrest rates among juveniles, families that do relocate to such neighborhoods will also, and in the long run, experience a 30 to 50 percent decrease in juvenile violent offense arrests (Ludwig et. al. 2001). These studies emphasize that the possible long-term benefits of a change of neighborhood, in terms of affluence and socioeconomic status, may outweigh the negative consequences of increased property offending.

Mennis et. al. (2011) also examined the effects of neighborhoods characterized by high poverty on juvenile delinquency. The authors examined the collective efficacy (community participation, perceptions of neighborhood, and feelings of belonging and trust among neighbors), socioeconomic character (percent receiving public assistance and minority populations), and crime rates of 45 neighborhoods in Pennsylvania. Their objective was to determine whether all or any of these factors were significant in predicting delinquency in juvenile

offenders. They found none of the collective efficacy variables to be related to delinquency rates, except for trust; increased distrust among neighbors was associated with increased delinquency rates. Of critical importance, however, is the finding that all of the socioeconomic factors were significantly correlated with delinquency. These conclusions, as well as those of the prior studies, further support the theory of social disorganization by indicating that high poverty is associated with increased crime and delinquency. A move to similar neighborhood results in juveniles' continued exposure to violent environments and an increased influence of criminogenic behavior. Conversely, moving outside of a city or to more affluent neighborhoods may provide positive changes of environment with better resources. The studies also hint at the importance that neighborhood context may embody for recidivism patterns in former prisoners returning to similar environments. To further examine this relationship, the next section is devoted to the existing literature with a focus on returning prisoners.

### ***Neighborhood Effects and Recidivism***

Neighborhood context also plays a significant role in influencing behavioral patterns of former prisoners. Some of the most recent studies focusing on social disorganization theory and similar social ecology theories have found certain neighborhood characteristics to be significantly associated to recidivism among ex-offenders. Kubrin and Stewart (2006) examined the effects of neighborhood disadvantage (percent on public assistance, people living below the poverty line, unemployment, and median family income) on recidivism. The scholars did so by measuring concentrated disadvantage and concentrated affluence, in which affluence was defined as families with incomes of \$67,759 or more (Kubrin and Stewart 2006). Not surprisingly, they, too, determined that neighborhood disadvantage is highly associated with recidivism, and that living in a neighborhood with relatively more affluent families decreases recidivism. Less disadvantaged

neighborhoods had a risk of recidivism of about 42 percent, while more disadvantaged neighborhoods had a risk of 60 percent (Kubrin and Stewart 2006). Thus, affluent neighborhoods are important, perhaps due to the amount of resources they have to offer, in curbing criminogenic behavior in former prisoners.

Similarly, Mears et. al. (2008) examined the extent to which resource deprivation and racial segregation, two of the most common measures associated with crime among ecological studies, are associated with recidivism (defined as reconviction) in released prisoners. Resource deprivation is important to social disorganization theory because it may lead to the disruption of informal social control within communities lacking economic opportunities and important institutions that enable community members to engage with their environment. Racially segregated areas are often characterized by high unemployment, mortality, and family disruption. These characteristics contribute significantly to the disruption of informal social control, and thus are important to social disorganization theory. In this way, the authors found that released prisoners who return to resource-deprived areas are significantly more likely to recidivate and be reconvicted of a violent crime. Resource deprivation, however, is negatively associated with drug and property recidivisms. Furthermore, racial segregation was not found to be highly associated with any form of recidivism; in fact, racial segregation is associated with less recidivism among young nonwhite males for drug crimes (Mears et. al. 2008). However, for crimes of property offending, young nonwhite males are at increased risk of recidivism in areas of high racial segregation, although not at a significant rate (Mears et. al. 2008). More importantly than racial segregation, however, the association between resource deprivation and recidivism may indicate that cumulative disadvantage may generate criminal subcultures and thus increase risks of recidivism, especially for violent offenses.

Resource deprivation, in terms of the lack of social service providers in a neighborhood, indicates an increased risk of recidivism in former prisoners. Hipp et. al. (2010) examined whether the proximity of social service providers had any effect on recidivism rates among California parolees and indicated that the presence nearby of these providers with minimal demand significantly reduced recidivism rates for serious offenses, especially among the African American parolee population. Social service providers with high demands are less likely to provide their services to parolees, and consequently, their medical or mental health problems go untreated, increasing their chances of reoffending. Concentrated disadvantage and social disorder, measured by the number of bars and liquor stores nearby, on the contrary, were strong predictors of increased risk of recidivism. Increased concentrated disadvantage in surrounding neighborhoods also increased the parolees' chances of recidivating. These findings further emphasize the importance of the availability of adequate resources and the degree of social organization in the neighborhoods that released prisoners are returning to, in order to curb their likelihood of recidivating and better increase their possibility to successfully reintegrate.

Measuring neighborhood disadvantage and disorganization through collective efficacy—perceptions of community participation, neighbors, improvement, belonging, and trust, socioeconomic character, and crime measures—Mennis et. al. (2011) found that high poverty and housing abandonment (a variable of the socioeconomic measure) were associated with recidivism among juvenile offenders in Philadelphia. The scholars also found that the higher the amount of personal-related (violent crimes) and drug-related crimes occurring in a neighborhood, the higher the rates of recidivism in that neighborhood (Mennis et. al. 2011). Collective efficacy was not associated with juvenile recidivism, however. Accordingly, the study confirms prior findings that recidivism is much more likely in impoverished neighborhoods characterized by high rates of violent crime, and in

disorderly neighborhoods with residential instability, as illustrated by its association with housing abandonment.

Arguing that moving away from the criminogenic influences present in many of the disadvantaged neighborhoods released prisoners are returning to, Kirk's (2015) most recent publication, using the same data from the post-Katrina cohorts, examined the connection between high concentrations of parolees in neighborhoods and recidivism rates among former prisoners. Kirk (2015) argues that concentrating former prisoners in a small number of neighborhoods may produce a contagion effect, in which the criminogenic influences propel returning prisoners to reoffend. As expected, released prisoners living further away from high parolee-concentrated neighborhoods—determined by the number of released post-Katrina parolees in different zip codes—were less likely to recidivate. In areas with extremely high parolee concentrations, about one third of recently released offenders are expected to be re-incarcerated within one year, and every additional released offender increases recidivism rates by 11 percent (Kirk 2015). Thus, findings suggest a strong relationship between neighborhood and recidivism, specifically indicating that former prisoners returning to a spatially clustered neighborhood of parolees are significantly more likely to recidivate. As a result, Kirk (2009) argues that the high rates of recidivism may be better explained by the fact that former prisoners live near each other, and are consequently more likely to be influenced to reoffend by the criminogenic influences presented in such neighborhoods.

The effect of high concentrations of former prisoners within a neighborhood on the recidivism rates of recently released ex-offenders was a characteristic also examined by Stahler et. al. (2013). In their study examining re-incarceration patterns within three years of release among released prisoners in Pennsylvania, they measured spatial contagion, the percentage of former prisoners living within one mile of each other. They then compared this to their recidivism rates and concluded that areas of high

spatial contagion are positively correlated with recidivism patterns. Contrary to the studies confirming the socioeconomic factors of social disorganization theory, however, this study did not find statistical significance between neighborhood environmental variables (concentrated disadvantage, residential mobility, social capital, and collective efficacy) and increased risk of recidivism. The authors suggest that this may be due to the varying measures of neighborhood characteristics between the different areas they studied. Nevertheless, spatial contagion as defined by these scholars is still an environmental factor that should be studied further, using social ecology theories of delinquency and recidivism. This will allow exploration of possible policy implications and suggestions for relocating returning prisoners, and dispersing them across neighborhoods, with more promising results for their reintegration process.

## **Conclusion**

This bibliographic essay has provided an overview of the current literature on the correlations between residential mobility and neighborhood context with delinquency and recidivism in former prisoners. Scholars now recognize that not all residential moves are detrimental for juveniles or for former prisoners. It is clear, on the other hand, that constant mobility may result in significantly negative consequences in terms of increased risks for both crime and recidivism. The specific reasons for how constant mobility, especially to disadvantaged neighborhoods, strongly predicts the likelihood of increased delinquency and recidivism are still not yet clear. This is an important avenue for future research to determine causal relationships that are essential to understanding how to alleviate the problem of mass re-incarceration and recidivism. Future research should also fully address the problem of selection bias in estimating neighborhood effects to gain a more accurate understanding about the specific neighborhood characteristics that influence recidivism in returning prisoners.



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# **Deliberation in the Federal Open Market Committee during Economic Challenges**

**Anibal Lopez**

Mentor: Dr. John T. Woolley  
Department of Political Science

## **Abstract**

*As Habermas and Cohen argue, democratic deliberation is the basis of legitimacy for policies and decision-making institutions in democracies. Chappell (2012) defines deliberative democracy as “un-coerced, other regarding, reasoned, inclusive and equal debate.” This paper explores the impacts of external challenges (recessions) on deliberation in an important policy-making institution, the Federal Open Market Committee (FOMC) of the Federal Reserve. Using computer-assisted content analysis, I analyze the verbatim transcripts of regular FOMC meetings during four recessions. This pilot study explores whether and how the quality and formality of deliberation within the committee are affected by these external challenges. I hypothesize that the research will show a decrease in the overall quality of deliberation, an increase in formality within the committee, and an increase in equality as the recessions approach and during the recessions.*

## **Introduction**

The Federal Open Market Committee (FOMC) is the main decision-making body of the U.S. Federal Reserve. It is composed of twelve voting members with several economists, aides and other staff present during their meetings. The committee meets about once every month to make monetary policy decisions. They make decisions via a deliberative process based on reasoned argumentation. My study focuses on the question of how economic challenges affect this deliberative process in the FOMC. It is important to understand how changes in economic conditions impact their decision-making for a number of reasons.

First, while many institutions in the United States use a similar deliberative decision-making process, the FOMC has unique qualities that differentiate it from the rest. Accountability is one of the biggest differences. While Congress and other policy-making institutions are directly accountable to the people via elections and public scrutiny, the FOMC has very little accountability to the people. The committee keeps verbatim transcripts of their meetings but they do not release these transcripts until five years after the meetings. This makes it difficult to hold anyone accountable for their decisions and positions since these would have occurred five years in the past. The extremely secretive nature of the committee makes their decision-making process all the more important. Understanding how they make decisions and how their decision-making process is affected during times of economic challenge is one of the ways to insure that the committee is doing its job.

Second, despite having very low accountability for their policies and approaches to our economy, their decisions have considerable impact on our daily lives. For example, the committee's decisions can influence the unemployment rate. While they do not directly exercise any control over this rate, their decisions on the money supply can be a deciding factor in whether

or not businesses decide to hire more people at any given moment. Its decisions also influence interest rates and market prices. FOMC decisions can increase or decrease interest rates for banks that will, in turn, affect the interest rates that people get on mortgages and other loans. If these rates get too high, people may be less likely to take out new mortgages, slowly down the growth of the economy. Clearly, the decisions that the FOMC makes are very significant and examining deliberation during economic challenges will allow for an analysis of how their decisions are affected by these events.

Before I was able to examine deliberation in the FOMC during economic challenges I had to understand a few basic concepts, including what conditions allowed for good deliberation, what range of factors affected deliberation and the decisions that resulted from the deliberation process, and how this process was used, particularly in the FOMC. I turned to previous literature in the field in order to gain a better understanding of these ideas and concepts.

## **Literature Review**

While deliberation has received a lot of attention from scholars, deliberation in the Federal Open Market Committee (FOMC) has not been researched extensively. I did identify an article by Woolley and Gardner (2014) written specifically on deliberation within the FOMC but the rest of the literature I consulted was not as specific to this study. As a result, the scholarship reviewed for this project focuses on deliberation in general, material about the FOMC, and decision-making during crises.

Woolley and Gardner's (2014) article on deliberation within the FOMC describes a study similar to the one I am conducting. In their study they focus on the conditions that make deliberation possible and use FOMC transcripts to test whether the committee meets these conditions or not. Woolley and Gardner argue:



“Conditions help to define the potential for deliberation; they create a deliberative setting. And they describe characteristics of participants or the ways persons would participate in a deliberative dialog. Thought of differently, achieving certain conditions might partly define sound or ‘good’ deliberation. That is, decision making generally is improved if it occurs in the context of deliberative conditions.”<sup>12</sup>

The idea that decision-making is improved if the conditions are more favorable to deliberation is fundamental to my study. Woolley and Gardner use equality, freedom and inclusion as the conditions essential to deliberation. They then use computer-assisted content analysis to search the verbatim transcripts for these conditions. In order to better understand why Woolley and Gardner selected these conditions, I reviewed the literature on deliberation. While most of my other sources focused on deliberation, this specific article had the largest influence on the framing of my study.

### ***Deliberation***

The literature on democratic deliberation is extensive and many scholars have made contributions in this area. Among the most prominent are Joshua Cohen, Amy Gutman and Dennis Thompson. Joshua Cohen’s (1989) article argues that deliberation is the basis of legitimacy for policies and institutions. He theorizes that because deliberation among members of an association uses reason to debate solutions to problems, the solution selected is the most legitimate one possible at the time. This is true because it is the solution that withstood the arguments of others and was selected as the best alternative. Cohen presents an “ideal procedure” of deliberative democracy that provides a model for institutions to mirror. This model consists of four main components: freedom, reasoned arguments, equality and an aim to

arrive at a consensus based on the arguments presented. He emphasizes that the goal of deliberation in an institutional setting is to arrive at a decision or to make a new law by stating that

“Even under ideal conditions there is no promise that consensual reasons will be forthcoming. If they are not, then deliberation concludes with voting, subject to some form of majority rule. The fact that it may so conclude does not, however, eliminate the distinction between deliberative forms of collective choice and forms that aggregate non-deliberative preferences.”<sup>4</sup>

Cohen’s focus on legitimacy shows the significance of deliberation for policies and policy-makers. His account of the “ideal procedure” is also important since it gives an overview of what he thinks are the essential conditions that deliberation must meet.

Gutman and Thompson also provide the conditions that they posit are essential to deliberation in their book *Why Deliberative Democracy?* Like Cohen, Gutman and Thompson believe that deliberation provides a means through which institutions and decision-makers can justify their decisions. They argue that in “the face of scarcity, deliberation can help those who do not get what they want, or even what they need, to come to accept the legitimacy of a collective decision.”<sup>7</sup> This approach offers a unique take, similar to Cohen’s, on the importance of legitimacy for policy and decision-making. Additionally, these authors also provide four conditions they found are essential to deliberation, including two that are the same as those that Cohen mentions. First, deliberation should be conducted through reasoned argumentation and these arguments need to be accepted by free and equal persons. Making decisions on reasoned argumentation is, therefore, a crucial component to the deliberative process. Argumentation is so essential to the deliberative process that Gutman and Thompson focus on the role of disagreement in

deliberation. Second, deliberation should be aimed at arriving at a decision; they state that participants in deliberation “intend their discussion to influence a decision the government will make, or a process that will affect how future decisions are made.”<sup>7</sup> While they say that a decision should be the end result of deliberation, they go further than Cohen and state that this is not a permanent decision.

Cohen does not list among his conditions the idea of a decision not being permanent. Gutman and Thompson argue that the process of deliberation should be dynamic and the decisions that are arrived at should be subject to change if, at a later time, a better argument is made for an alternate solution. Their final condition is that the reasons given for a decision are accessible to anyone whom that decision affects. Gutman and Thompson expand on the arguments offered by Cohen and add some conditions that they find essential for deliberation. After learning the main theories about deliberative democracy, I read about the FOMC and tried to apply this theory to the scholarship on the FOMC.

### ***Federal Open Market Committee (FOMC)***

Bob Woodward and Allen Meltzer each wrote very influential and insightful books on the FOMC. Woodward’s *Maestro* focuses on Alan Greenspan’s tenure as the FOMC Chairman. By interviewing members of the FOMC, staff and politicians during these years, Woodward focuses on the challenges that Greenspan faced as chair. He discusses Greenspan’s reaction to certain economic challenges such as a stock market crash and recessions. During the 1991 recession, the FOMC Vice Chairman disagreed with a decision being proposed by the Chair Greenspan and yet he did not vote against it because, as he stated, “...I think it is better to show a united Federal Reserve against the criticism that we are surely going to get for this move.”<sup>11</sup> During the 1987 stock market crash, the FOMC had also been united to show solidarity and commitment to a certain course

of action. This implies that during times of economic challenge members of the FOMC are less likely to voice their disagreement than usual. In addition, the FOMC rallied behind the more experienced members during these times and followed their advice. Woodward states that the Vice Chairman knew

“There would be more arguments about when the Fed would stop raising rates, and those arguments would be more important than this argument. If he shot his cannonball now, it would be wasted—because he wasn’t going to change the decision. He would have fallen on his sword for no reason.”<sup>11</sup>

This illustrates the condition that Gutman and Thompson emphasized, a dynamic deliberative process that allows for decisions to be altered in the future. Also, as Cohen and Gutman and Thompson argue, with the condition of equal and free deliberation, the members have the freedom to come to their own conclusions and voice their opinions in the FOMC.

Meltzer provides a historical account of events that occurred in the FOMC. Using the verbatim transcripts, minutes and other sources of data, Meltzer compiles a report of the events throughout the history of the FOMC and reactions to them in the committee. One of the events I am looking at is the 1980 recession, which Meltzer also references in his book. Before the recession hit, Meltzer mentions that the members disagreed on a course of action and had to compromise. During this period before the recession it appears that there was much disagreement on what course to take and at one point, “the FOMC did not reconcile the different positions”<sup>10</sup> of the members, showing just how divided the committee was. Once the 1980 recession began, disagreement, or at least the voicing of disagreement, decreased. Committee members, such as

“Teeters and Partee, favored an easier policy, but went along with the consensus,”<sup>10</sup> again showing how deliberation within the

committee was affected by the recession. Furthermore, Meltzer states that following the end of the recession

“Divisions became more pronounced within the FOMC. In the first eight months, there had been five dissents, three of them by Henry Wallich who often favored a more restrictive policy, and two dissents favoring less restriction at the May meeting. After August, there were dissents at all six regular and telephone meetings.”<sup>10</sup>

This shows that deliberation again changed after the recession ended, indicating that during times of economic challenges, deliberation within the FOMC undergoes some type of alteration. Meltzer also discusses the 1981 recession, a second event that I examine in this study. According to Meltzer, during this recession the committee found consensus but largely remained divided. Meltzer’s historical account of the FOMC supports Gutman and Thompson’s, and Cohen’s argument that deliberation is helpful in making participants come to a consensual decision based on the argument that is best defended using reason.

Important for this study is an article by Hari Das that assesses the impacts of crises on decision-making. Das focuses on how the high levels of stress created by crisis situations impact the reasoning behind decisions being made. He defines crises as rare events that are unexpected, provide a limited amount of time for a response, and threaten the values and responsibilities of the committee or organization.<sup>6</sup> Crises, Das argues, reduce mental efficiency due to high levels of stress and he states that “individuals become committed to group decisions and even may change their personal beliefs, moral codes and attitudes to reflect that of their group.”<sup>6</sup> This supports the effects of economic challenges on deliberation in the FOMC, as seen in Meltzer and Woodward, where members were agreeing with the group even if personally they had different values or ideas. Das indicates other

impacts that crises situations can have on decision-making bodies, including “a reduction in the numbers of persons participating in decision processes and authority for decision-making shifts to higher levels in an organization,”<sup>6</sup> which would imply that deliberation would decrease in the FOMC during times of economic challenge. Not only would deliberation decrease quantitatively but procedures within the committee would be tightened which would also reduce the quality of the deliberation. While the events I analyze are not exactly considered crises, they are crisis-like moments that are somewhat unexpected, restrict reaction time and threaten the responsibilities of the organization.

I used the Woolley and Gardner article to develop my research question and borrowed the methods they used for my project. This article laid the foundation for my study and was extremely influential throughout the process. The literature on deliberative democracy was used to define what I meant as deliberation as well as the variables or conditions that I would be measuring during my project. After reading all of the arguments, I decided to focus on disagreement, interruptions and number of comments made by members of the FOMC, which allows for an assessment of the quality, formality, and equality of deliberation. I used the books by Woodward and Meltzer on the FOMC to apply the theory to the actual context I would be exploring and to come up with a hypothesis. Finally, Das’ article on the impact of crises was influential in allowing me to understand further what I could expect as a reaction in deliberation to economic challenges. Combined, these works provided me with the intellectual foundation and background to proceed with my study.

## **Methods**

For my exploration of how economic challenges affect deliberation within the FOMC, I used computer-assisted content analysis to search verbatim FOMC transcripts for relevant ideas, themes or patterns. I chose this type of data collection method

because the verbatim transcripts from FOMC meetings are very large documents that would require more time and resources than I had available to read individually. Using Chappell's (2013) definition of deliberative democracy as "un-coerced, other-regarding, reasoned, inclusive and equal debate," I focused on using the content analysis to assess the quality, formality and equality of deliberation within the committee during economic challenges (recessions).

In order to see the change in deliberation during economic recessions the project was designed to examine three different time periods: the five-month interval before the recessions of 1980, 1981, and 1990 began, the entirety of the recessions, and five months from the date of the end of the recession. The dates used as the beginning and end of a recession were obtained from the National Bureau of Economic Research. The five-month intervals before and after each recession were selected in order to maximize this time period while maintaining consistency throughout the analysis. Since the first recession being observed occurred in 1980, 5 months is the maximum amount of time that could be used because Paul Volcker had only been Chairman for five months prior to the beginning of the recession. Had I gone with a longer interval of time, we would have had to account for the change in leadership as a possible explanation for a sudden change in deliberation. By keeping leadership in the committee constant throughout each recession we can look at how the recession itself, and not some other variable, affects deliberation. A problem I encountered using this method was that the recessions were of varying lengths of time. The data are analyzed in a manner that takes into account the number of meetings per recession as well as the length of the meetings. This design provides data that can then be used to compare the quality, formality and equality within the committee during each event and across events.

The quality of deliberation is directly related to the amount of disagreement that occurs. As a result, disagreement is used to

measure the quality of deliberation. More disagreement means that members feel free to express their views, even if they differ. Also, more alternative arguments are brought up and deliberated due to increased disagreement, which enhances the quality of decisions made. Although it is difficult to measure every instance of disagreement without reading the transcripts, using a list of words and phrases that signal differences among members can help us get an idea about the patterns and levels of disagreement in the FOMC. This list of words and phrases was drawn from Woolley and Gardner (2014) who used it in previous projects (see **Appendix A**).

Interruptions are used to measure formality within the committee since they imply a less structured and formal deliberative setting where the exchange of ideas takes place more freely. A decrease in interruptions signals a more formal and procedural setting, whereas an increase in interruptions means a less formal and procedural setting. The meeting transcripts are verbatim, allowing us to detect interruptions by searching for comments that are not punctuated to express the end of a sentence or idea. After conducting a few searches and reading through the results it became apparent that the writers of the transcripts used “-” to show the end of an incomplete statement by a speaker. Based on this transcription device, I developed a search that allowed me to see all the instances in which a speaker gets interrupted.

In the future, the findings that are collected through this computer-assisted content analysis will be complemented using a different method. I will take a random sample of transcripts from each event and read through and code them. I will again be looking for changes in disagreement, interruptions, and number of comments but much more in depth due to a full reading of some transcripts. The results from the coding can then be compared to those found during the content analysis to verify if it is measuring correctly what it is supposed to measure. It is important to be able to measure what we are looking for so that we can accurately



assess deliberation in the FOMC during times of economic challenge. Knowing how committees such as the FOMC react to challenges is crucial to understanding the deliberative process and how different aspects affect decision-making and the policies that result from it.

## Results

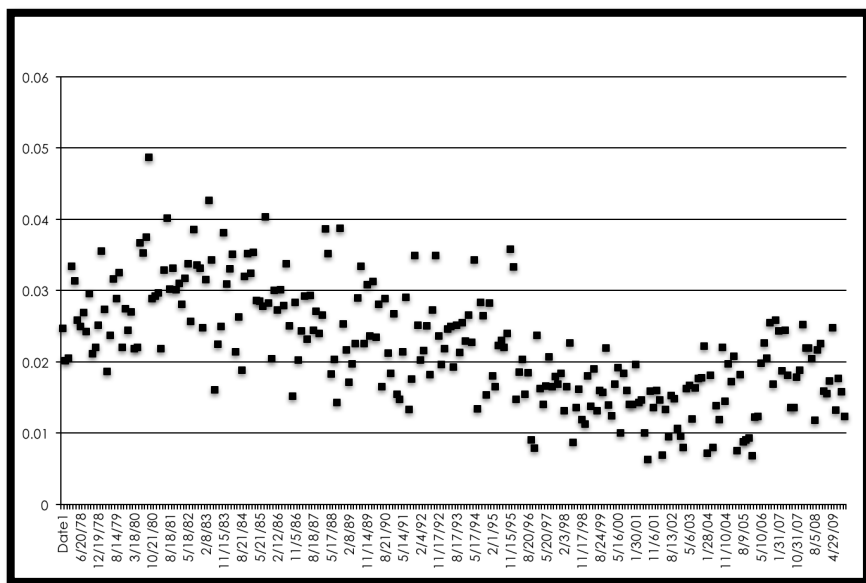
After collecting data on the different variables being measured, I was able to analyze and convert this data into results. The results yielded some very interesting patterns in deliberations throughout the history of the FOMC; however, the changes during the crises were much less apparent.

### *Quality*

In terms of quality, I hypothesized that the quality of deliberation would increase as the recession approaches, decrease during the recession and begin to increase after the recession ends. Woodward and Meltzer signaled that there was less disagreement during times of economic challenge. While there still may have been differences in ideas and views, during times of economic challenge members do not voice their differences as often because they want to appear united and committed towards a common course of action. Thus, I predicted the research would show that as a recession drags on, the levels of disagreement, or quality of deliberation, will decrease in order to indicate some confidence in markets of a unified committee.

The results did show what we expected to find to some degree, though not completely. **Figure 1, below**, shows that once a recession hits there is some decrease in disagreement immediately following the beginning of the recession. However, this decrease does not continue and overall disagreement tends to fluctuate for no apparent or discernible reason. Overall, there does appear to be some patterns in disagreement taking place. For example, **Figure 1** shows that disagreement stays fairly constant

until about 1994/1996 when there is a small declining trend in the disagreement in the FOMC. Then, in about 2004, the declining trend shifts to an upward trend but given that there was not enough data after this year we cannot conclude that it is a real trend and not just a brief episode of high disagreement. These results signal that there is not a significant change in disagreement during economic recessions, and as such, the quality of the deliberation in this organization does not change very dramatically.



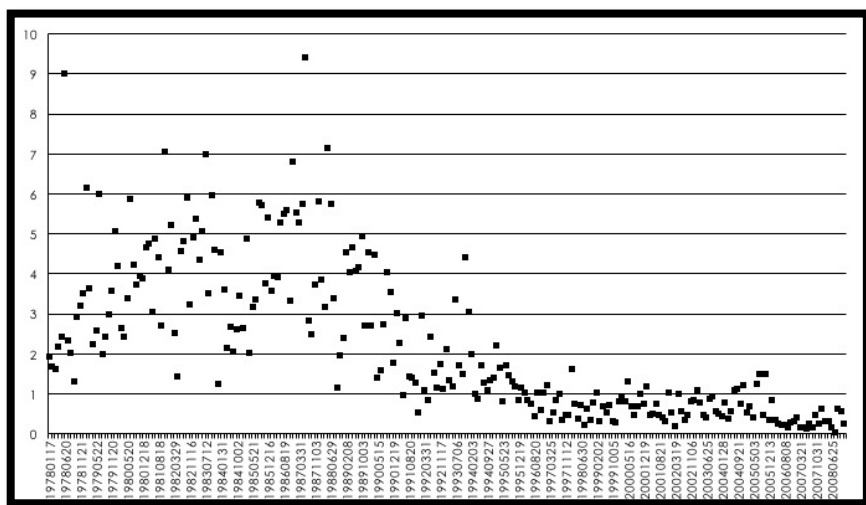
**Figure 1: Frequency of Disagreement Per Meeting**

### *Formality*

The formality of deliberation in the FOMC also seems to be influenced slightly by economic challenges. I hypothesized that the formality of deliberation would decrease during the recessions and increase again after the recessions end or towards the end of the recessions. While there does seem to be some decline in the number of interruptions during the recessions, it is not a consistent pattern and there appears to be a lot of fluctuation. As **Figure 2**

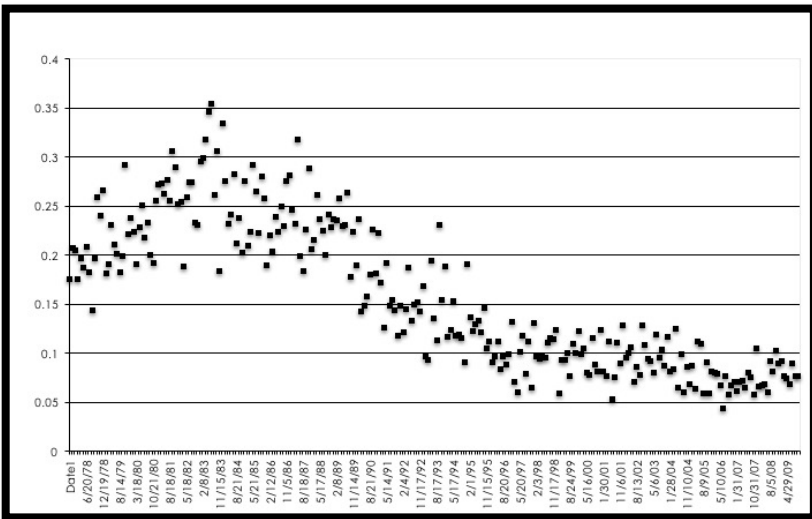
shows, there is a decline in interruptions during each recession but there are also many other steep declines and increases at other times as well. This can be because other economic challenges are occurring at those other levels of decline or because this measure is capturing much more than just economic challenge.

Also, the transcription process seems to have changed sometime in 2002-2003, as our method of detecting interruptions no longer works with the data. This makes the later results much more questionable as the changed process may have missed some interruptions. Solving the problem with this variable was not possible given the amount of time available to complete this pilot study. However, one possible solution to this problem would be to read the transcripts and see exactly what changes in the way interruptions are recorded on the transcripts. It is also possible to record all of the interruption by hand, a very time consuming process. To better understand how the formality of the committee changes during recessions given the weakness of the interruptions measure, it is necessary to develop a second measure for the same variable.



**Figure 2: Interruptions Per Meeting**

As a second measure of both quality and formality, I used speaker change per meeting. This means that I looked at how many times the speaker changed during a meeting since the more that it changes, the more give and take that is occurring. Also, the more times the speaker changes, the less formal a meeting would be since it would indicate that members are allowed to speak and then respond to one another freely. Therefore, speaker change should decrease during times of recessions, which would signal a more formal structure and less give and take, and a decreasing number of interruptions and disagreements occurring within the committee. As **Figure 3** below shows, when the recessions hit, the number of times the speaker changes per meeting goes down. This means that we should also see some kind of reduction in the level of disagreement and interruptions during these periods.



**Figure 3: Speaker Changes Per Meeting**

One of the interesting patterns that appear in all three figures is a downward trend after certain years. For example, speaker change, disagreement and interruptions appear to decline or trend downward after about 1988-1990 and then again in 1993-

1995. These represent times of major change and shift for the committee. In 1987 Alan Greenspan replaced Paul Volcker as the Chairman of the committee. It could be the case that Greenspan ran things in a much more formal and structured manner than his predecessor, which would explain the general downward trend in the frequency of these variables after he takes the position. Another event that occurs is what is referred to as the “sunshine effect.” Starting sometime in 1993, Chairman Greenspan revealed to the FOMC that they were being recorded and verbatim transcripts of their meetings were being kept. Transcripts had been kept for about two decades but the committee member were not aware of this until 1993 when Greenspan notified them. These transcripts were being kept in order to have a record of the meetings and increase transparency about the committee’s actions and deliberation. Political scientists refer to the change in behavior that is caused by keeping a recording or transcript of meetings as the “sunshine effect.” This is another factor that could have led to a downward shift in these variables, since members do not want to appear rude and uncooperative in transcripts. The downward trend is probably represented best in **Figure 3** where during these two events there is a brief spike in speaker change and then significant declines afterwards.

The results collected for this pilot study did not yield any findings supporting the hypothesis that the FOMC’s deliberation changed during times of economic recession. In fact, they tend to show that there was little to no change in their deliberative process regardless of the occurrence of recessions. Instead, it appears that there may be other major forces at play such as change in leadership and the “sunshine effect” that cause the deliberative process to change. Despite not yielding the results I had predicted, the analysis was still very useful in showing that the committee continues to deliberate normally even during economic challenges, which could in itself be a very good sign of the committee doing its job efficiently.

## Conclusion

As the data collection process proceeded for this study, a few problems arose that raise intriguing questions for future research. First was the problem with the interruptions data where for the last several years there were zero interruptions, or at least they were not transcribed using our method. Second, leadership was not taken into account and it seems that leadership may actually be one of the most important factors in the deliberative process in the FOMC, especially during times of economic challenge. Given the length and nature of the project as a pilot study, I do not think that these pose any threat to the validity of these findings. On the contrary they raise more questions that may require a closer look. For example, what has the impact of the “sunshine effect” been on the committee and its deliberative process and what role does the leadership play in changing the organization’s process?

While these are interesting questions to study I believe that this committee must be studied in a more general sense. The deliberative process, while important, is not all-inclusive and leaves out many questions regarding the committee’s decision-making. For example, why did they make the decisions they did during recessions, and in particular during the 2007 recession? How did they reach those decisions? Who was responsible for making those decisions? Instead of analyzing the deliberative process itself, I propose using their deliberations to answer bigger questions about their decision-making in general with a particular emphasis on the recent 2007 recession as a focus given its severity and the amount of intervention by the FOMC and Federal Reserve in general.

This study shows just how little is known about the decision-making process of one of the most insulated and powerful organizations in our government. It raises many valid questions that deserve to be examined closely, especially in the context of the

Great Recession, a crisis that shook the very core of our economy and whose effects are still felt in the everyday lives of many Americans.

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## **Appendix A: Disagreement Search Criteria:**

“oppose ” ” disagree ” “I could not accept” ” respectfully” ” ridiculous” “would disagree” ” would not support” ” would oppose” “am I wrong” “confused me” “disassociate myself” “don't agree” “don't have any basis” “dubious” “entirely mistaken” “express a different judgment” “express a different view” “express an opposing view” “I admit to being confused” “I also am opposed” “I am just not convinced” “I am not comfortable with” “I am quite frankly opposed” “I am really confused” “I am simply not comfortable with” “I am still opposed” “I cannot agree” “I can't agree” “I certainly am opposed” “I certainly disagree” “I disagree” “I dissent” “I do not believe” “I do not share” “I do not share” “I do not think” “I don't agree” “I don't believe” “I don't see” “I don't tend to agree” “I don't think” “I don't understand” “I feel I have to quarrel” “I got a little confused” “I happen to disagree” “I have to disagree” “I have to quarrel” “I just am not convinced” “I just can't agree” “I just cannot agree” “I just do not agree” “I just do not believe” “I just don't agree” “I just don't believe” “I just do not believe” “I just don't think” “I just do not think” “I just have to disagree” “I may be a little confused” “I may be mistaken” “I may be wrong” “I may disagree” “I must dissent” “I object” “I oppose” “I question” “I really disagree” “I would really dissent” “I really question” “I simply don't feel” “I simply don't think” “I was somewhat confused by” “I will dissent” “I would be opposed” “I would certainly be opposed” “I would in fact be opposed” “I would not ” “I would object” “I would oppose” “I would quarrel” “I would strongly oppose” “I wouldn't like” “I'd be opposed” “if I'm not mistaken” “if I'm wrong” “I'm a bit confused” “I'm a little confused” “I'm against” “I'm confused” “I'm equally confused” “I'm getting a little confused” “I'm getting confused” “I'm going to disagree” “I'm just confused” “I'm just in general opposed” “I'm just not convinced” “I'm not convinced” OR “I'm opposed” “I'm pretty much opposed” “I'm so confused” “I'm somewhat confused” “I'm still a little confused” “I'm thoroughly confused” “I'm totally confused” “I'm very confused” “I'm violently opposed”

"Implausible" "it would be a mistake" "Might disagree with you" "no it isn't" "not correct" "not go along with" "not persuaded" "not persuasive" "not true" "respectfully disagree" "ridiculous" "simply can't" "simply cannot be" "simply wrong" "strongly against" "strongly opposed" "tend to disagree" "that would be mistaken" "that's mistaken" "think that's wrong" "think you're mistaken" "unalterably opposed" "unless I am mistaken" "utterly opposed" "very much opposed" "very opposed" "we cannot afford" "we can't afford" "we can't afford" "we just cannot afford" "we just can't afford" "we really cannot afford" "we really can't afford" "we should stop" "we simply cannot afford" "we simply can't afford" "what I said" "with all due respect" "you leave me totally confused" "you're wrong" "illogical" "incorrect" "END OF MEETING" "END OF SESSION" AND NOT ("don't disagree" "no dissent" "not disagree" "I have no reason to disagree" "I can't disagree" "I can't really disagree" "I find very little to disagree with" "I wouldn't disagree" "I don't think anyone will disagree" "I dissented" "I opposed" "I don't think anyone would disagree" "I couldn't disagree" "can't disagree" "I do not disagree" "I don't think I will dissent")

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# Examining Sex Differences in Stress-Induced Potentiation of Ethanol Sensitivity

Eugenie Guzelian

Mentor: Karen Szumlinski

Department of Psychological and Brain Sciences

## Abstract

*Alcohol Use Disorders (AUDs) and Affective Disorders have been shown to be highly co-morbid, suggesting similar etiologies. In addition, stress reactivity and alcoholism-related behaviors are sexually dimorphic, where females exhibit greater sensitivity. Previous studies have shown that binge drinking increases responsiveness to acute stress and repeated stress increases sensitivity to acute alcohol in male mice. However, the influence of prior history of binge drinking or repeated stress upon behavioral responsiveness to alcohol is not well studied in either sex. Our study hypothesized that stress-alcohol interactions will be more robust in females than males. Adult male and female mice with a mixed genetic background were subjected to an 11-day unpredictable chronic mild stress (UCMS) procedure or were injected daily with saline as a control. All mice were then tested for alcohol-induced locomotion (1, 2, 3, and 4 g/kg) in activity monitors and alcohol-induced intoxication on rotarod. We found that control males exhibited lower alcohol-induced locomotion and less alcohol-induced sedation, relative to females. Males exhibited UCMS-alcohol locomotor cross-sensitization at all alcohol doses tested and the sedative effect of 4 g/kg alcohol was potentiated in UCMS males. In contrast, UCMS female mice exhibited locomotor cross-sensitization only at the 1 g/kg dose and exhibited less alcohol-induced sedation upon injection with 4 g/kg alcohol. These preliminary findings support prior evidence for sex differences in sensitivity to the locomotor stimulatory and intoxicating effects of alcohol and provide novel evidence that the interactions between stress and alcohol is sexually dimorphic, which is of potential relevance for the etiology of AUD and Affective Disorder co-morbidity.*

## **Introduction**

The link between Affective Disorders (such as Major Depression) and Alcohol Use Disorders (AUDs) has been shown to be correlational through a significant number of studies, indicating that the etiology of both may have similar foundations. Binge drinking, specifically, is the most prevalent AUD; the official definition is having 4 or more drinks (4+) for females and 5 or more (5+) drinks for males over a two-hour period (White et al, 2006). The neuropsychological underpinnings of binge drinking and alcohol dependence are still under investigation. In addition, sex differences have been reported for both disorders and have shown to greatly influence the link between Affective Disorders and AUDs. Below is a brief analysis of previous work conducted on the sex differences on the symptoms of AUDs.

### **Behavioral and Emotional Symptoms of AUDs**

Alongside neuropsychological expressions of AUDs and their connection to Affective Disorders, behavioral and emotional connections link these two disorders. In most of the scholarship based on experimental design, the affective symptoms that are exhibited in AUDs have been assumed to be withdrawal symptoms, since withdrawal symptoms may mimic depression. When testing withdrawal symptoms after a history of alcohol dependency, it was found that male mice with a history of binge drinking exhibited much higher levels of negative affect, including anxiety and depression, than mice with a history of only drinking water (Lee et al, 2015). These emotional disturbances, while present during acute withdrawal, can persist. In this animal model of binge drinking, the hyper emotionality persisted well beyond the time when the acute physiological withdrawal symptoms have receded.

The studies that employ an animal model are in line with the observation that Affective Disorders are more likely in people with a history of alcohol, even in protracted withdrawal. (Hasin &

Grant, 2002). In fact, people with a prior history of binge drinking were found to be 4.2 times more likely to develop Affective Disorders, such as Major Depression, than people without alcohol dependence. These findings remained constant even after a year of recovery.

Beyond the emotional aspects of alcohol dependency and Affective Disorders, behavioral differences between people with a history of alcohol dependence and social drinkers have also been observed. Alcohol and stress, or cues associated with these stimuli, increase sensitivity to distress and alcohol cravings, which is “marked by increased anxiety, negative emotion, systolic blood pressure responses and [...] behavioral distress responses” (Sinh et al., 2009).

These data on AUDs and alcohol dependence further knowledge on the similar bases of AUDs and Affective Disorders by examining their correlation. The confirmation that Affective Disorders are more common in people with a history of alcohol dependence, whether or not they are *caused* by AUDs, adds to greater understanding of the etiology of both disorders. Nonetheless, a causal direction remains unclear and can only be addressed through well-controlled studies that are difficult to perform in human subjects. As such, this study employs animal models subjected to repeated stress and alcohol induction in order to examine a causal relation between alcohol and stress.

## **Gender Differences in AUDs**

Many, if not most, studies conducted on AUDs and Affective Disorders have focused on the experiences of males and neglected to incorporate the experiences of females, who have a higher chance of comorbidity between depression, anxiety, and panic disorders, and alcoholism (Brady & Randall, 1999). Females also have higher risk of developing alcoholic liver disorders (such as cirrhosis), more fatal and life-threatening consequences, and experience social disapproval, and negative consequences earlier in

their drinking careers, due to alcoholism. They even have higher levels of alcohol dependence; yet their experiences are usually ignored (Annis et al, 1998). It is imperative that researchers take gender/sex into consideration when searching for the etiology of AUDs and Affective Disorders.

The ways that men and women develop and deal with alcoholism is generally shown to be different. For example, although their levels of relapse are equal, female alcoholic clients are much more likely to relapse due to negative emotions, whereas male clients tend to relapse due to social pressures to drink (Annis et al, 1998). As indicated by these differences, it would not be surprising if levels of alcohol-reactivity would also differ in individuals with a prior history of stress.

## **Methodology**

### ***Subjects***

The subjects of this study were adult (8-10 weeks old) male and female mice with a mixed C57BL/6J X SvJ129/Xi background (see Shin et al, 2003; Quadir et al, 2015). The mice were bred at the University of California, Santa Barbara (UCSB) from heterozygous breeders, originally provided by the laboratory of Dr. Paul F. Worley (see Quadir et al, 2015 for details). All experimental protocols were consistent with the guidelines mandated by National Institutes of Health (NIH) and were approved by UCSB's Institutional Animal Care and Use Committee (IACUC).

### ***Unpredictable Chronic Mild Stress (UCMS) Procedures***

Our study examined sex differences in the effects of unpredictable chronic mild stress (UCMS) upon locomotor sensitivity and intoxication. Half of the male and female mice were subjected to UCMS procedures, which were similar to previous studies (e.g. Quadir et al, 2015). UCMS procedures occurred over



an 11-day period. Morning procedures occurred before noon (8:00 h-12:00 h), afternoon procedures occurred between 14:00-17:00 h, and over-night (O/N) procedures started at 17:00 h and ended at 8:30-9:30 h. For all O/N procedures, the mice were returned to their original home cage or to a fresh home-cage the next morning. As described in Quadir et al. (2015), animals are subjected to 1-2 stressors per day and the number and/or severity of the stressors increased over the course of the 11-day period. **Table 1** below provides the complete timeline of the specific procedures used in our UCMS model.

**Table 1:** *UCMS procedures used (Quadir et al, 2015)*

DAY	TIME	UCMS PROCEDURE
1	O/N	Exposure to damp bedding (~300 ml water onto home cage bedding)
2	AM	1-hour immobilization (ventilated 50 ml conical tube)
3	PM O/N	5min exposure to 2% isoflurane anesthesia (in induction chamber) Cage tilt (role of tape added to bottom of corner)
4	AM PM	1-hour exposure to soiled rat bedding 5-minute forced swim (30x45cm pool with room-temp water)
5	All day O/N	Exposure to damp bedding Food and water deprivation
6	AM O/N	5-minute forced swim Shifted light cycle (transferred to a different colony room)
7	PM	1-hour immobilization

	O/N	Single-cage/isolation housing
8	AM PM O/N	5-minute exposure to 2% isoflurane anesthesia 1-hour exposure to brightly lit arena (in Plexiglas box with white walls) Housing with soiled bedding from strange male (switched cages)
9	AM PM O/N	1-hour immobilization 1-hour exposure to soiled rat bedding Food and water deprivation
10	PM O/N	15-minute forced swim Cage tilt with damp bedding
11	AM PM O/N	1-hour exposure to bobcat urine (cage walls wiped with bobcat urine) 3-hour housing in shifted light cycle Single-cage/isolation with soiled bedding from strange male
12 (Test)	AM	15-minute locomotor
13 (Test)	AM	Saline injections and placed in activity monitor Rotarod training
14 (Test)	AM	Acute dose of alcohol (1 g/kg)  15-minute locomotor 15-minute rotarod test
15 (Test)	AM	Acute dose of alcohol (2 g/kg)  15-minute locomotor 15-minute rotarod test
16	AM	Acute dose of alcohol (3 g/kg)

(Test)		15-minute locomotor 15-minute rotarod test
17 (Test)	AM	Acute dose of alcohol (4 g/kg)  15-minute locomotor LORR test

As a control for the UCMS procedures, half of the mice received once daily intraperitoneal injections of saline (0.01 ml/kg) for 11 days. This was used as a way to habituate the mice to the handling and injection procedures used for the locomotor test (Quadir et al, 2015).

***Test for alcohol-induced locomotor activity***

Male and female mice were tested for alcohol-induced locomotion as an index of behavioral sensitivity to the drug. A within-subjects approach was employed in which each mouse received increasing doses of alcohol (1, 2, 3, 4 g/kg) once a day across four days. On each day, immediately following the injection, mice were placed into Plexiglas activity chambers for 15 minutes, as in our previous study (Quadir et al, 2015). Digital video tracking and ANYMaze software (Stoelting Company, Wood Dale, IL) were used to record the total distance traveled.

***Test for alcohol-induced intoxication***

Prior to any alcohol locomotor testing, the female and male mice were first trained to walk on a fixed speed (10 rpm) rotarod (IIT Life Science, Woodland Hills, CA), using procedures similar to the ones described in Cronise et al. (2005) and Quadir et al. (2015). The rotarod apparatus had 5 rotating rods covered in sand paper to prevent slipping. Each fall and time of the fall was recorded through the sensors located beneath the floor of each rod. To familiarize animals to the rotarod apparatus, training began

with habituating mice. Training consisted of habituating mice to walking on the rotating rod during a 3-minute session. If the mouse fell during that session, it would immediately be placed back on the rod until 3 minutes had passed. After habituation, all the mice underwent further training on the apparatus, which consisted of an additional series of 3-minute trials, with 30-second rest periods in between. During these 3-minute training trials, if an animal fell from the rod, the time of the fall was recorded and it was left on the apparatus floor until the next 3-minute testing trial. A mouse was deemed “trained” once it was able to complete a total of three 3-minute trials without falling from the rod.

On the days of testing for alcohol-induced locomotion, we also assayed for alcohol-induced intoxication. Immediately following the end of locomotor testing (i.e., ~15 min post-injection), the mice were tested on the rotarod. Testing consisted of subjecting mice to three 3-minute rotarod trials, with 30-second rest periods between trials. Again, if the mouse fell, the time of the fall was recorded and it was left on the apparatus floor until the end of the trial. Then, the average time spent on the rotarod under the influence of alcohol was determined across the 3-minute test trials as an index of alcohol intoxication (Quadir et al, 2015).

### ***Loss of Righting Reflexes (LORR)***

The Loss of Righting Reflexes (LORR) paradigm is used to test the sedative effects of high dose alcohol. In our study, we examined for sedation following injection with 4 g/kg alcohol as an alternative index of intoxication. In this phase of study, we employed a behavioral rating scale to measure their intoxication level after laying the mice down on their backs for 10 seconds three times. The rating scale is from 5: “completely immobile” to 0: “cannot get them on their backs.” **Table 2** provides the complete rating scale).

***Table 2: Loss of Righting Reflexes (LORR) rating scale***

Score	Rating
5	Completely immobile
4	Able to move limbs
3	Able to turn onto side
2	Able to turn onto side within 10 seconds
1	Able to turn onto side immediately
0	Refuses to turn on back

### ***Monitoring Health Outcomes***

To provide an objective index of the efficacy and severity of our UCMS procedures, all mice were weighed daily. The coat conditions of the mice were also examined at the start of each day by using visual inspection of the face, top of the head, abdomen, shoulders, and back as well as left and right flanks for signs of dishevelment/lack of self-care (Quadir et al, 2015). The assessments of the coat conditions of each body part were as follows: 0=well-groomed, 0.5=moderate degradation, 1=unkempt. Higher score indicated that the coat is in poor condition, which is a sign of low levels of self-care and grooming (Santarelli et al, 2003; Surget et al, 2008; Tanti et al, 2012).

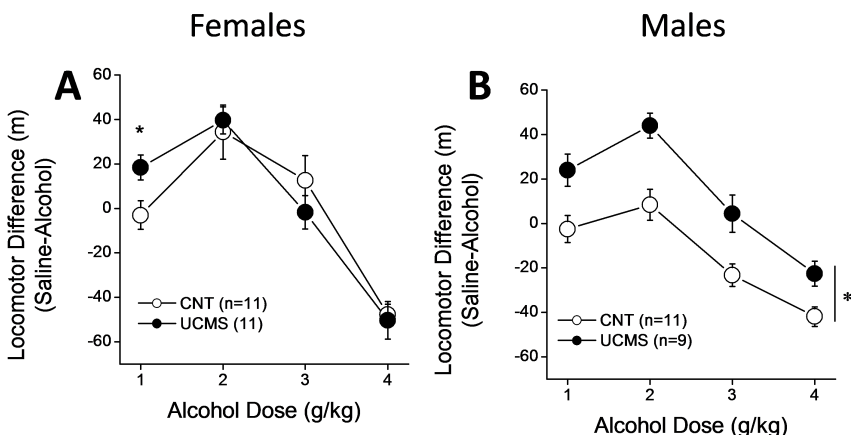
## *Statistical Analyses*

Health outcomes of the UCMS measures were analyzed using a Sex X UCMS X Day ANOVA, with repeated measures on the Day factor. The locomotor and rotarod data for this experiment were analyzed using a Sex X UCMS X Dose ANOVA, with repeated measures on the dose factor. The average LORR data for each mouse were analyzed using a Sex X UCMS univariate ANOVA.  $\alpha=0.05$  for all analyses.

## **Results**

### *Alcohol-Induced Locomotion*

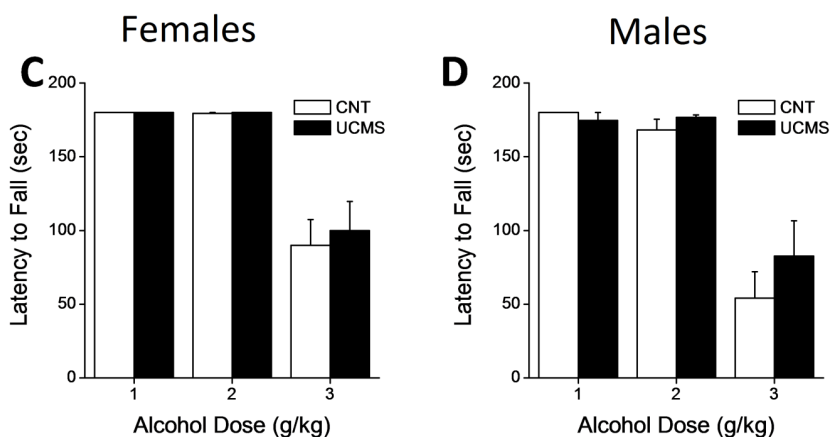
After being injected with each dose of alcohol, the total distance traveled by the mice was calculated. **Figures 1A and 1B** illustrate the results. The data for females are presented in the left column, while the data for males are presented in the right column. Statistical analysis of the results indicated sex differences in locomotor behavior [Sex X Dose interaction:  $F(3,114)=8.18$ ,  $p<0.0001$ ; Sex X UCMS X Dose interaction:  $F(3,114)=2.30$ ,  $p=0.08$ ]. As seen in **Figure 1A**, a history of UCMS does not affect total distance traveled by female mice, except when injected with 1g/kg [UCMS X Dose interaction:  $F(3,60)=2.88$ ,  $p=0.04$ ]. In this instance, female control mice ran less than female UCMS mice ( $t$ -test,  $p<0.05$ ). Thus, UCMS increased sensitivity of female mice to the locomotor-activating effects of low-dose alcohol. **Figure 1B** shows the difference between male control and male UCMS mice. Across all doses, male UCMS mice ran more than control mice, suggesting an increase in the efficacy of alcohol to induce locomotor hyperactivity in UCMS males [UCMS effect:  $F(1,54)=3.24$ ,  $p=0.03$ ; UCMS X Dose interaction:  $F(3,54)=0.27$ ,  $p=0.85$ ].



**Figures 1A and 1B:** Locomotion differences with 1, 2, 3 & 4 g/kg alcohol

### ***Alcohol-Induced Intoxication***

When analyzing the results of the rotarod, we determined intoxication levels based on how long it takes them to fall, if they fall at all (see **Figures 1C and 1D**). Analysis of the results of this study failed to indicate a sex difference in the interaction between prior stress history and alcohol dose on this measure of intoxication [Dose effect:  $F(2,76)=94.96$ ,  $p<0.0001$ ; no Sex or UCMS interactions,  $p>0.05$ ]. However, visual inspection of the data suggested that female mice, whether in the UCMS or control conditions, did not differ in their latency to fall. On 1g/kg and 2g/kg, all of the female mice remained on the rotarod for the full 180 seconds (3 minutes). They were more likely to fall on 3g/kg between 90 to 120 seconds (**Figure 1C**). Similarly, male mice tended to remain on the rotarod when injected with 1 or 2 g/kg alcohol and fell primarily when injected with 3 g/kg. However, as observed in females, there was no effect of UCMS in male mice (**Figure 1D**).



**Figures 1C and 1D:** Rotarod latency to fall with 1, 2, 3, & 4 k/kg alcohol

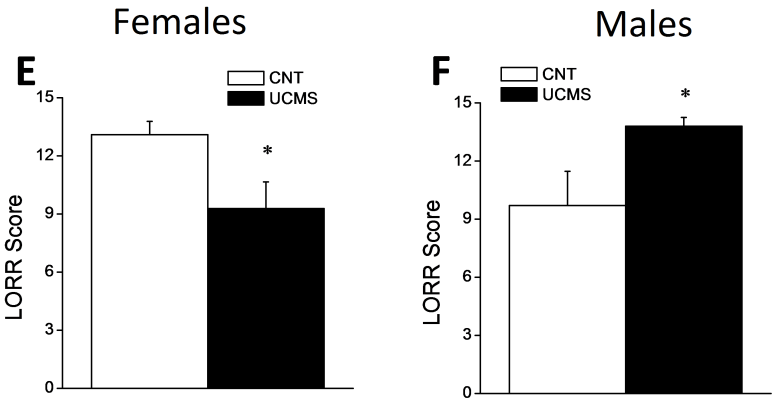
### ***Loss of Righting Reflex (LORR)***

Due to its sedative effects, we were unable to conduct rotarod testing on mice injected with 4 g/kg alcohol as the vast majority of mice fell immediately upon the initiation of rotarod testing. Thus, after being administered 4g/kg alcohol, each mouse was given three trials of LORR, in which they had 10 seconds to right themselves. The average LORR score was used in the data analysis (please see **Figures 1E and 1F**). Here, we observed a significant Sex by UCMS interaction [ $F(1,41)=4.81$ ,  $p=0.03$ ]. When comparing the female mice, **Figure 1E** shows that female UCMS mice had a lower average LORR score than female control mice (t-test,  $p<0.05$ ). This indicates that a history of UCMS desensitized female mice to the sedative effects of 4 g/kg alcohol.

In male comparisons, we see the opposite effect where male UCMS mice were more likely to have a high LORR score



(Figure 1F) (t-test,  $p=0.07$ ). This indicates that a history of UCMS sensitized male mice to the sedative effects of 4 g/kg alcohol.



**Figures 1E and 1F:** Loss of Righting Reflexes (LORR) scores between CNT and UCMS mice

### Health Outcomes

The weight of the animals during each day of the UCMS or control procedures was recorded and evaluated. Analysis showed that there was no significant weight shift, regardless of their UCMS or control group, indicating a strong sign of health [Sex X UCMS X Day interaction:  $p=0.65$ ]. On average, the UCMS and control male mice weighed approximately 20.5 to 23 grams while the UCMS and control female mice weighed 17.5 to 20.5 grams. The weight average stayed consistent through eleven days of UCMS procedures across all groups. In addition to weight, coat condition scores were evaluated on a scale from 0 to 1, higher scores indicating anxiety and stress. On average, the mice received a 0 throughout the UCMS days, indicating well grooming. As these data were all negative, the results are not shown.

## Discussion

Control females exhibited greater alcohol-induced locomotion than control males, as illustrated in **Figures 1A and 1B**, which is observed by viewing the total distance traveled when injected with 1, 2, 3, and 4 g/kg after the UCMS procedures. The difference, in fact, was much higher with 2 and 3 g/kg, while it diminished when injected with 4g/kg. This was consistent with our predictions that females exhibit greater alcohol-induced locomotion. There were no major differences between male and female UCMS mice, which contradict our prediction that across all conditions, females will exhibit greater locomotion.

In addition, the study did not predict that females would show resilience to our UCMS procedures upon alcohol-induced activity. This was observed through the lack of cross-sensitization seen in their alcohol-induced locomotion and lower alcohol-induced sedation. What we did observe here, however, could be a ceiling effect, at least in the locomotor assay. This is when females are running as much as they possibly can when not exposed to UCMS; they might be physically unable to travel any further when they are exposed to UCMS. Future directions of this study would seek to eliminate the possibility of a ceiling effect as a confounding variable.

A history of UCMS did not alter the effects of intoxication when monitored for latency to fall on the rotarod, although males tended toward greater sedation when injected with 3g/kg (**Figure 1D**). Even then, the difference was not as dramatic as we had previously predicted. Overall, females and males did not differ when examined on the rotarod, suggesting that females were not more sensitive to alcohol. This contradicts previous studies that found that females are more sensitive to alcohol and are more likely to exhibit intoxication when induced with alcohol.

The LORR paradigm was used to assess intoxication at a 4g/kg dosage as an alternative to the rotarod paradigm because

pilot studies indicated that mice would be physically incapable of staying on the rotarod with a dosage that high. UCMS females exhibited lower LORR scores than control females, indicating either a reduction in the sedative properties or an increase in the stimulatory properties of alcohol in stressed female subjects. This finding is interesting as reduced sensitivity to the sedative properties of alcohol in female UCMS mice would be predicted to promote the capacity to consume higher amounts of alcohol related to Affective Disorder-AUD comorbidity. However, as reported previously by our group (Quadir et al., 2015), UCMS male mice showed higher intoxication than control male mice, indicating more sensitivity to alcohol when exposed to UCMS paradigms. The opposite sex difference in the interaction between UCMS and the sedative properties of alcohol is intriguing and argues for a very important role for sex hormones in determining how a prior history of stress impacts alcohol sensitivity.

Overall, our study sought to illustrate the sexual dimorphism of stress-alcohol interaction; this included intoxication and locomotion differences. As we know from our previous mouse work and clinical studies, a prior history of binge drinking can profoundly influence affect. Thus, in studies in the future, we will seek to incorporate a binge drinking paradigm before our UCMS paradigms in order to test whether a history of binge drinking would augment the effects of stress and possibly bring on different results (for more information on binge drinking, please see Quadir et al. 2015).

Binge drinking behaviors of college students bring to the fore the real-life implications of this study. As reported in White et al., college freshmen in the United States binge-drank two to three times more than the binge threshold exhibited by the general population, irrespective of age (White et al, 2006). This means that college students have much higher levels of binge drinking than their non-college counterparts. They are also exposed to both unpredictable and predictable chronic, mild stress through the start

of their time in university. It is important for us to understand how alcohol drinking after episodes of chronic, mild stress and a history of binge drinking will affect students. With that knowledge, we might be able to better educate students on the dangers of binge drinking and possibly prevent the long-term effects of stress-alcohol interaction.

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Shukran.

# **Latino Parental Engagement: A Case Study of Four Latino Immigrant Parents' Engagement with the Local Control and Accountability Plan**

**Bertin Solis**

Mentor: Dr. Richard P. Durán  
Department of Education

## **Abstract**

*While parental involvement has positive effects on students' academic achievement, schools have frequently failed at engaging Latino parents. Parent-school programs can serve as intermediaries between schools and families. In order to implement effective parent-school programs, it is important to understand the processes parents go through in defining and addressing school related issues. This case study focused on data from Padres Líderes, a 12-week parent leadership program located on California's central coast. The study examined how a group of four Latino immigrant parents developed a presentation during spring of 2014 regarding school safety as part of their district's mandated Local Control and Accountability Plan (LCAP). Preliminary findings based on transcripts, event maps and drafts of letters composed by parents reveal the group's negotiation of school safety concerns that resulted in a letter presented to their local school board. This negotiation process involved parents naming safety issues in their children's schools, analyzing underlying issues in need of resolution, and collectively agreeing on a set of priorities for school safety.*



## Introduction

Latino students' unequal academic achievement and educational attainment in comparison to other ethnic and racial groups has been well documented (Gandara and Contreras, 2009; Yosso, 2006). Many factors contribute to unequal educational outcomes for Latino students including the prevalence of racially/ethnically segregated schools, poverty, tracking, low teacher expectations, and schools' ineffective approach to engage parents (Valenzuela, 1999; Gandara and Contreras, 2009). Educators, staff, and school leaders in U.S. schools often take Latino parents' lack of involvement in traditional forms of participation (e.g., attending open-house events, serving on parent committees) to mean a disinterest in their children's education (Tinkler, 2002; Hill and Torres, 2010). This misperception represents a cultural disconnect between schools and Latino parents about what parental involvement means that in turn prevents schools from effectively engaging parents.

PIQUE (Parent Institute for Quality Education), AVANCE, and the Mexican American Legal Defense and Education Fund (MALDEF) Parent School Partnership (PSP) are some of the best-known parent programs serving Latino and low-income parents. However, what distinguishes the MALDEF PSP program from other programs is its focus on organizing and equipping parents with civic engagement tools necessary to advocate effectively for their children's education. A study by Gonzales and Chrispeels (2008) found that participants in the MALDEF PSP program developed effective strategies for advocacy that involved collective and individual actions in multiple contexts of the educational system including the classroom, school, and school district levels (p.9). This case study contributes to the current research by providing an intimate understanding of the ways that Latino immigrant parents as part of Padres Líderes (a local version of the MALDEF PSP model) engaged in advocacy aimed at improving the educational experience of their children and schools.

To conceptualize what parental engagement means in the context of the parent-led action project (a subset of the Padres Líderes 12-week class), I use the Ecologies of Parental Engagement (EPE), Critical Pedagogy, and Bridging Multiple Worlds frameworks. The goal is to understand how parents in Padres Líderes collectively addressed school issues in need of resolution during spring of 2014 via presentations to their local school board with the goal of influencing the Local Control and Accountability Plan (LCAP).

### ***Context of Padres Líderes***

Padres Líderes (Parent Leaders) is a 12-week parent leadership program held in two elementary schools located in a city on California's central coast: Maryville elementary (pseudonym) and Hill elementary (pseudonym).<sup>1</sup> College Paths (pseudonym), an outreach center located at a neighboring university that aims to increase students' access to higher education, sponsors the program. Padres Líderes uses as a guide the Mexican American Legal Defense and Educational Fund (MALDEF) Parent School Partnership (PSP)<sup>2</sup> curriculum. The purpose of the PSP curriculum is to aid schools and community organizations in engaging Latina/o parents in their children's educational attainment, schools, and community. Padres Líderes works primarily with Spanish-speaking low-income immigrant parents with the goal of providing information and resources that will help them navigate the school system while developing their leadership skills to improve the schools in their community. Some of the topics covered during the 12-week curriculum are *Parent Rights and Responsibilities*,

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<sup>1</sup> To protect the identity of the participants in this study, I use pseudonyms for participants' names, for schools where the program took place, and for the actual program name. I also do not disclose the location of this study.

<sup>2</sup> Information on MALDEF PSP curriculum:

<http://maldef.org/LEADERSHIP/programs/psp/index.html>

*Structure and Function of the School and School District, and Politics of Education.*

***The Local Control and Accountability Plan (LCAP)***

LCAP is a three-year budget plan required by all school districts in California as part of California's school funding law -- the Local Control Funding Formula (LCFF). The LCFF<sup>3</sup> took root in the Budget Act of 2013, a policy that changed financing for K-12 education in California. In the past, school districts had a set amount of funding for specific programs, and districts were not able to allocate money to programs based on varying degrees of need. With LCFF, districts receive funds based on grants aimed to increase student achievement. Each school district receives a base grant of \$7,643 per student, a supplemental grant amounting to 20% of the base grant for every English learner and foster youth student, and free and reduced lunch for eligible students (only 1 category per student). A third grant allocates 50% of the base grant to the school district if that district has 55% or more students who are English learners, free and reduced lunch eligible students, or foster youth students.<sup>4</sup>

The LCAP is a requirement of the LCFF designed by the state to address student needs and parent engagement. The school district's three-year LCFF plan requires input from students, parents, staff and community. Through the LCFF, eight state priorities need to be included in each district's LCAP. These priorities include basic conditions for student learning, implementation of state standards, access to a broad course of study, pupil achievement, parent involvement, pupil engagement, school climate, and other pupil outcomes (physical education, arts

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<sup>3</sup> Information on the LCFF and LCAP can be accessed through: [www.cde.ca.gov/fg/aa/lc](http://www.cde.ca.gov/fg/aa/lc)

<sup>4</sup> For more information on LCFF funding allocation see: <http://www.cde.ca.gov/nr/el/le/yr13ltr0724.asp>

etc.). Thus, the connection between the LCAP/ LCFF and Padres Líderes parents' participation at an LCAP school board meeting falls in the LCAP's category of parental engagement. Given this opportunity for parental engagement, parents from Padres Líderes aimed to address school-related concerns that were relevant to the LCFF 8 state priorities. The four areas of need that Padres Líderes parents prioritized were summer academic classes for students, after school tutoring, English Language Learner reclassification, and school safety.

### ***Ecologies of Parental Engagement (EPE)***

Angela Calabrese Barton, Corey Drake, Jose Gustavo Perez, Kathleen St. Louis, and Magnia George (2004) developed the Ecologies of Parental Engagement (EPE) framework in an attempt to understand what parental engagement means for parents from non-dominant backgrounds.<sup>5</sup> The EPE framework challenges the notion that parents from non-dominant backgrounds are disinterested in their children's education simply based on single observations of parents' participation, or lack thereof, in formal school activities (e.g. parent-teacher conferences, open-house events). The authors challenge cultural deficit perspectives of parents from non-dominant backgrounds by acknowledging the barriers (e.g. time constraints, unfamiliarity with U.S. school systems, cultural differences, English language proficiency, etc.) that parents from such backgrounds face in participating in school-sanctioned activities and by noting that parental engagement requires the effort of both school actors (e.g. teachers, staff, district officials) and parents. On the one hand, schools, as organizational systems of power that set the boundaries for what engagement means, must work to create spaces where parents can interact and

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<sup>5</sup> As discussed in the article, the parents in the study were immigrants living in poverty-concentrated urban communities, who did not speak English and who were unfamiliar with U.S. educational systems.

be heard about “what they know and want” (pg. 11). On the other hand, the authors show how parents themselves can construct such spaces by interacting with school actors and forging a role in those settings. In both cases, school actors are in a position to facilitate parents’ engagement and agency.

Barton et. al (2004) describe parent engagement as the mediation between space and capital. This refers to the interactions between parents and school actors that form contexts for parents to create a role for themselves within a space that parents can then use to have a say about what goes on in schools and in their children’s education. The degree to which parents are able to “position” themselves within spaces as “authors” of their children’s education depends on how well certain ideas, values, and constructs are valued in the spaces in which parents interact, the individuals who are involved in the spaces, and most importantly, individuals “orientation to action” within those spaces (p. 8). To clarify the meaning of spaces, Barton et al. elaborate on several of its aspects:

“Spaces ... are constituted by underlying structures and resources, have weak boundaries, are sites of contestation within which culture is produced and actors utilize a particular organization of resources. Furthermore, spaces, like fields, can be understood by macro and microstructures that give rise to a particular place of interaction. Certainly, spaces are defined by the *individuals* who come together for particular reasons, just as teachers and children do for the teaching and learning of academic subject in schools, and the *roles* they play in different spaces. However, spaces are also shaped by the *rules and expectations* for participating together in that space, such as a state testing mandate or a classroom-based policy on group work; the *tools* typically enacted for that shared participation, such as the curriculum

selected by a district, school or teacher; and the mediating *artifacts* produced in that participation such as a school's decision to build a community garden or the weekly test preparation experiences required in math class. All of these qualities that define spaces are themselves dynamic culturally and historically, underscoring the changing and shifting nature of space (p. 5)."

Orientation to action refers to people's motives or intentions about the framing of the spaces in which they interact. The last point that brings all these concepts together is that when we think about parental engagement, we need to move beyond "re-actions" (i.e. school-sanctioned activities where good parental involvement is defined by parents' attendance at and accordance with such activities) as valid forms of parents' engagement and move towards "critical actions." Creating spaces that foster critical actions means that the definition of good parental involvement shifts from parents as "helpers" of schools to parents as "authors" in partnership with other school members (p. 8). To aim for spaces that foster "critical-actions" means that parents can question the practices of school systems and forward alternatives along with other members in schools interested in children's growth and improvement of schools.

### ***Critical Pedagogy***

Critical Pedagogy stems from education philosopher Paulo Freire's (2000) work, *Pedagogy of the Oppressed*. In this paper, I refer to Joan Wink's 2011 book *Critical Pedagogy: Notes from the Real World* to explain how critical pedagogy's methodology and theory helps us understand human activity in practical learning settings. Wink discusses three aspects of critical pedagogy: problem posing, critical praxis and conscientization. Problem posing is centered on the idea that interactive dialogue emanates from critical reflection upon the world by posing problems in need

of resolution and implementing actions aimed at solving the problems (p. 160). Critical Praxis is a representation of what critical pedagogy looks like in practice; it is a cyclical process that involves, “identifying a problem, researching the problem, developing a collective plan of action that addresses the problem, implementing the collective plan of action, and evaluating the action, assessing its efficacy, and re-examining the state of the problem” (Wink, 2011; 74).

This approach also has implications for the way that learning takes place in the classroom through curriculum and through teacher and student interactions. For instance, Paulo Freire (2000) states:

“Through dialogue, the teacher-of-the students and the students-of-the teacher cease to exist and a new term emerges: teacher-student with students-teachers... here no one teaches another... {people} teach each other, mediated by the world... [It] involves a constant unveiling of reality... [It] strives for the *emergence* of consciousness and critical intervention in reality (p.63-64).”

Critical pedagogy involves a transformative experience for all who are engaged in dialogue and action about finding solutions to problems posed. In this process, individuals develop *conscientization*, the process by which they develop a critical awareness of social conditions and how such awareness allows them to reposition themselves to address those conditions by coming to understand the “power in their voice, experiences and knowledge” (Wink, 2011, p. 57).

In essence, Critical Pedagogy stresses the need for a cyclical process where dominant and non-dominant actors pose problems and solutions and evaluate their actions with the intent to change something that needs to be improved. It notes the importance of breaking power relations within the classroom or

other settings, shifting towards a more transformative pedagogy, and engaging in changing their communities and society. In this way, Critical Pedagogy is particularly important as we envision a more *empowering* approach to engaging Latino immigrant parents, an approach where parents are partners in improving educational systems.

### ***Bridging Multiple Worlds (BMW)***

The BMW is a theory developed by Catherine R. Cooper (2011) to examine how youth navigate the multiple “worlds” of family, peers, school, and community. According to Cooper (2011), the term “worlds” has several other labels: “spheres of influence,” “activity settings,” “microsystems” (p.63). All have the connotation of social and institutional settings with varying cultural practices in which humans participate. BMW holds that there are “support systems, opportunities, and barriers” that youth face as they traverse through the educational system (Cooper, 2011, 10). Another BMW concept is “cultural brokers,” which refers to individuals who help youth engage successfully in multiple worlds (Cooper, 2011, 11). Cultural brokers for youth can be families, peers, schools, and communities. Cultural brokers have distinct cultural capital (that is, knowledge of how things work) that can help youth navigate unfamiliar settings (Cooper, 2011; 75).

The BMW framework can be used to understand Latino parents as they navigate through different worlds including the home, programs like Padres Líderes, and public institutions such as schools and school districts. The framework is particularly useful in addressing the cultural disconnect between Latino immigrant families and U.S. school systems; specifically, the framework aids in understanding the role of Padres Líderes as a parent-school program that aims to embrace Latino parents as partners. BMW can be used to examine how Padres Líderes valued parents’ knowledge within the ecology of the program and to understand



how parents' capacity to engage in other ecological spaces outside of Padres Líderes such as home, schools, classrooms, school district, and school board meetings was developed. The concept of cultural brokering will be particularly relevant as we aim to understand the interactions between parents and program instructors.

### ***Summary of Frameworks***

A combination of the BMW, EPE and Critical pedagogy provides a powerful approach to understanding parents' participation in the Padres Líderes parent-led action project. All three frameworks help us understand individuals' participation in multiple settings. Key to all three frameworks is the central belief that Latino parents are essential partners in the education of children; each rejects the view that parents manifest "cultural deficits" or a disinterest in their children's education. BMW is unique in that it provides a lens through which to examine how parents navigate across institutions and highlights the ways that "cultural brokers" in Padres Líderes enable parents' capacity to engage in multiple settings outside of Padres Líderes. EPE and Critical pedagogy both challenge the power relations that exist between school and parents and provide an approach to understanding how people, through interaction with others, can create dynamics in a setting conducive to empowerment and critical awareness about the needs of schools. This awareness can then lead parents to author spaces and position themselves as advocates for their children. The three frameworks provide extremely valuable approaches to understanding parents' actions as they navigate across multiple spaces to be active participants in their school, communities and children's education.

### **Research Questions**

This research focuses on the four Padres Líderes parents who composed and presented letters regarding school safety concerns and solutions to a local board meeting as part of the

LCAP process. The following three research questions frame this case study:

- 1) How did Latino immigrant parents in the program contribute towards developing a response to the district mandated Local Control and Accountability Plan (LCAP)?
- 2) What were the processes parents underwent in defining “school safety” as a target area for the proposed LCAP?
- 3) How did parents compose and present a letter petition to their local district?

## **Methods**

### ***School Demographics***

Data from the California Department of Education shows that in the 2013-2014 school year, 98.6% of students at Maryville elementary were Latino, 82.3% English learners, and 91.7% economically disadvantaged (as measured by the state criteria). Data on Hill elementary showed that 94.5% of all students were Latino, 75.6% were English learners and 83.3% were economically disadvantaged (below poverty levels).<sup>6</sup>

### ***Instructors and Research Team***

The staff involved in Padres Líderes included four instructors and three researchers. The four instructors were bilingual in Spanish and English. All instructors received training from MALDEF to implement the 12-week PSP curriculum. Two of the instructors were former graduates of the program. The other

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<sup>6</sup> For more information on poverty levels see:  
<https://aspe.hhs.gov/2014-poverty-guidelines>

two instructors were current teachers at Hill and Maryville. The research team consisted of a bilingual (English and Spanish) PhD student (head researcher), and two bilingual (English and Spanish) university undergraduate research assistants. I was one of the research assistants and my role was to collect multiple sources of data such as video/audio recordings and artifacts created by parents, (such as worksheets, rough drafts of letters, etc.). I also oversaw the completion of multiple forms (consent, evaluations and demographic forms), tracked parent attendance, and was a participant observer.

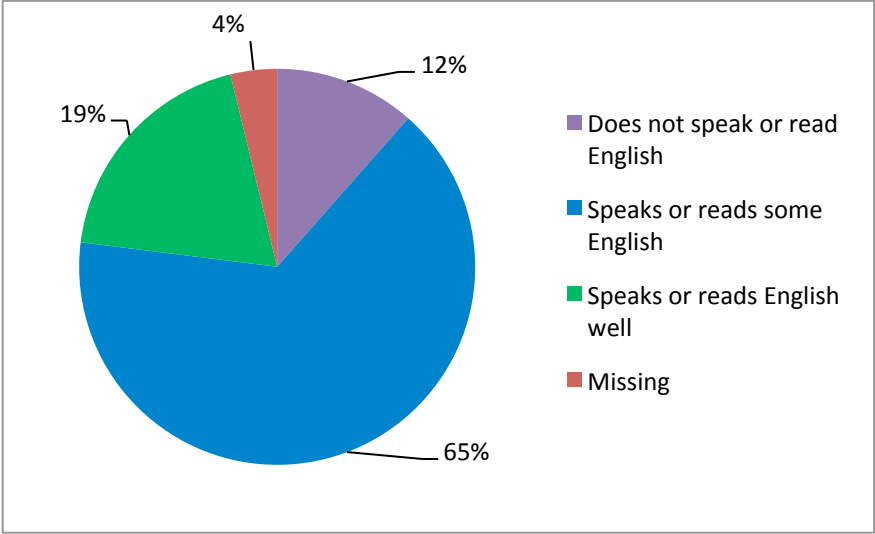
In addition to my data collection responsibilities, I also had the opportunity to build close relationships with the parents. For instance, before sessions started, parents would speak with me about their families, their experience in their native countries and in the U.S., their motivations for being involved with Padres Líderes, their work and career life, their expectations for their children, and so on.

During the parent project, I worked with the group of parents that adopted as its goal developing a plan regarding school safety as part of the input to the school district. Although at first I tried staying more on the “observer” side in terms of participation, the facilitator would often include me in the conversation by asking me questions regarding how to approach the activities of the parent project. I sat with the group through 3 of 4 of the sessions in which they met. For each session, I took notes that I would later use to write summaries of my experience during sessions (within 24 hours).

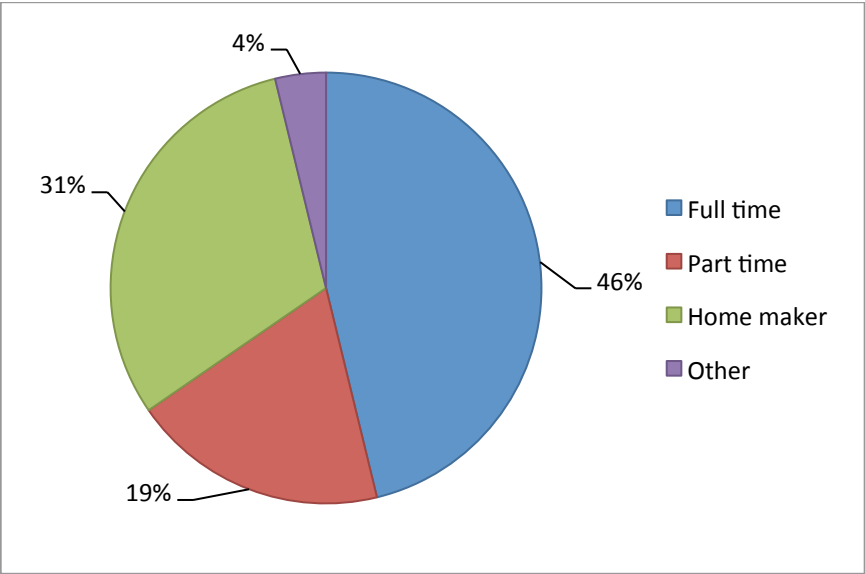
At the beginning of the program, there were 26 total parent participants; at graduation, there were 21. Demographics of the original 26 parents show that 69% were female and 31% male. 89% indicated Spanish and 11% indicated English as their primary language spoken at home. For place of origin, 92% indicated Mexico as their place of origin and 8% indicated U.S. Regarding

educational level, 62% indicated they had no high school diploma and 23% indicated they graduated high school. The charts below also provide demographic information on English fluency (**Chart 1**), employment status (**Chart 2**), and annual household income (**Chart 3**).

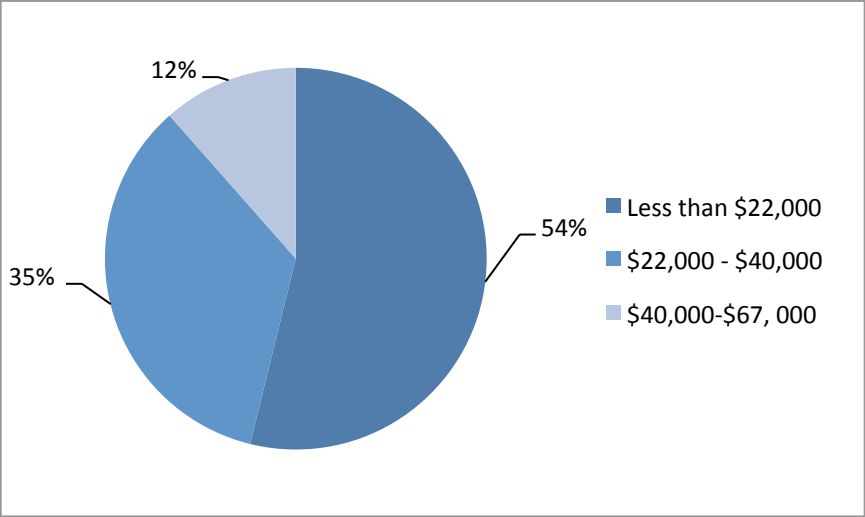
**Chart 1: English Fluency of Parent Participants**



**Chart 2: Employment Status of Parent Participants**



**Chart 3: Annual Household Income of Parent Participants**



The four parents whose participation I am discussing in this study were two females and two males. All four participants indicated they were of Mexican origin and that Spanish was their native language.

## **Data**

The research team employed a case study method to collect multiple forms of data. The primary forms of data were audio and video recording of all classroom activities during the span of the 12-week program. Other forms of data included artifacts created by parents or instructors and event maps and transcripts depicting parents' interactions and themes in conversations. Examples of artifacts involve worksheets from the MALDEF curriculum parents used during the parents projects, charts instructors created as teaching tools, and drafts and final versions of letters that parents co-constructed in preparation for their presentation at a school board meeting. This method allows me to focus on understanding the context in which the parents participated and the behaviors and details in those settings.

Data analysis involved use of Transana qualitative software for video and audio analysis of four sessions when parents met as a group to work on their letter to the school board and the final presentation by one parent to the school board regarding how school safety issues might be targeted as part of the school district LCAP plan. My data on the four target parents I studied also included collection and content analysis of artifacts such as letter drafts created by parents during the four sessions. Analysis of the full set of data I collected makes possible an in-depth interpretation of the strategic thinking and actions undertaken by parents during sessions and leading to the school board presentation of their final letter regarding school safety as part of the school district LCAP.

## Findings

The following is a descriptive account of parents' participation in the parent project based on data from video, audio, artifacts, transcripts and event maps. It depicts how parents in the school safety group went about developing a response to the district mandated LCAP and the processes those parents undertook in defining school safety. Here, I describe the dialogue parents engaged in during the four group sessions. I begin with the first time parents met as a group and end with a description of the final presentation to the school board.

### *Group Session 1*

In the first session, the four parents (Ana, Noemi, Franco and Reynaldo) and the group facilitator (Marisol, a class coordinator) met to discuss school safety problems and solutions. All parents except Reynaldo had children attending Hill elementary school; Reynaldo had a child attending Maryville elementary school. Each parent received a 2-sided worksheet in Spanish provided as part of MALDEF's PSP curriculum. On the front side, the worksheets served to aid the group in defining the problems in their schools. Some of the questions on the worksheet were, *"What problem bothers or worries your team?"* *"What do you think is causing the problem?"* *"Why is your answer to the second question happening?"* The other side of the worksheet asked parents to name the top four causes of the problem and their top four solutions. These worksheets were illustrative -- evidence of what these parents were reflecting on, both individually and collectively, as they dialogued.

Overall, the parents mentioned four key themes within the frame of school safety: traffic, weapons, drugs, and bullying. The parents first defined the overarching problem as "school safety" both in their dialogue and in worksheets but as dialogue progressed, other labels emerged. Franco was the first person who brought up a concern that as parents drop off their children at

school, lack of traffic control often results in drivers not respecting pedestrian crosswalks or speed limits. Ana mentioned that in other schools in wealthier neighborhoods they have a speedometer-post marking the speed limit as cars pass by. Parents also noted that there is a lack of police supervision of traffic and that having a police officer in front of the school would help this problem. Reynaldo noted that this was a good idea but that it raises another concern: parents who do not have driving licenses are at risk of getting in trouble with police if they go over the speed limit; they may risk losing their car. Reynaldo's statement was alluding to the possible undocumented status of people who at the time were not able to obtain driving licenses. Marisol responded that this should not be an issue as parents that do not have a license will be more responsive to the speed-limit post and will ensure that they go at the speed limit. In Marisol's view, the possibility of parents facing problems with police was less important than risking the loss of a child's life. Ultimately, Marisol mentioned that this issue of public traffic was not an adequate topic to present at a school board meeting. She argued that because the street is part of the public space the school board and district staff would have no say about their concern and that it would not fit into the LCAP priorities. She did acknowledge that parents still had a responsibility to advocate for these changes, but that the topic would require a different plan of action such as addressing their concerns at a city council hearing or to the police department.

Reynaldo noted that having a system where children's' backpacks are checked for weapons and drugs is important; Franco agreed. Noemi also contributed to this conversation, noting the need for a system that checks for weapons and drugs more often because these items are becoming very common in schools. She also suggested that schools implement metal detectors such as those used in courthouses. Marisol did not respond positively to this suggestion; she mentioned that courts have metal detectors because they are allowed to. Franco asked her to clarify if she was suggesting that court members' safety was more important than



their children's safety. Marisol acknowledged that weapon presence in schools was a significant issue in need of resolution, but that current school policies and laws do not permit this approach to school safety. She posed a question to Noemi and Franco asking them how they would feel if their own children had their backpacks searched, even if they were innocent. Noemi and Franco held their ground saying that those measures would be part of keeping their children safe in schools. Ana did not participate in this topic but Reynaldo did note that this process of checking backpacks, using dogs, or metal detectors has its positives and negatives because while it could prevent drug use and weapon presence in schools, it could also scare the children.

Initially, Franco mentioned that drug presence in schools was more common in junior high schools than it was in elementary schools but Reynaldo shared an account of a child who received drugs from a student who was older and the negative psychological effects on the child. Later in the conversation, Franco reflected on an experience with drugs that his own elementary school daughter went through. Franco recounted the time when someone offered his daughter drugs in the shape of candy. He noted that youth are putting drugs in brownies, candies, or gummies and giving them to the younger children. He mentioned that while children may not get drugs in or near the schools, they still have access to drugs in their neighborhoods that can then make their way into schools. Noemi and Reynaldo agreed on the need for schools to ensure drugs are not going into schools. Noemi and Marisol suggested that using a dog to check backpacks 3 times a year was a viable solution.

Reynaldo added that another important aspect regarding drugs was that parents needed to learn how to communicate with children about these issues. Following up on this, Franco noted that there needed to be some sort of system where drugs and weapon presence are supervised but that both students and parents need to be educated on these topics (he also emphasized how this applies

to bullying and the group agreed with his statement). Marisol summed up the conversation by stating that drug use and weapon presence are problems in all schools (including elementary schools) and that the solution could involve implementing a drug and weapon supervision system and classes for parents and children on topics such as drug abuse and bullying.

Lastly, towards the end of the meeting, Franco commented on the benefits of having a police officer at schools. He mentioned that a police officer is able to build a good relationship with the students both inside and outside the school. Franco stated that this rapport with students allows police officers to recognize and point out when students are not doing well and that police officers could then intervene earlier rather than later.

### ***Group Session 2***

While the first session was about defining school safety, session two focused on collectively constructing a rough draft of a letter that synthesized the many ideas they discussed during session 1. Prior to working as a group, all 21 parents who participated in the parent project component of *Padres Líderes* watched a video of a Latina mother presenting a letter to the school board. This video served to prepare parents to incorporate similar elements in their letter. It also exposed parents to a Latino parent role model for how a parent would present a letter to a school board, and familiarized them with the meeting room organization and procedures of a school board meeting.

Reynaldo was assigned the role of writing the letter but everyone (except Ana since she was absent this day) grappled with words to create a letter that included the major themes that arose from the prior discussion (parents used their worksheets to remember the key topics they discussed). This rough draft letter was composed as if Reynaldo would present the letter but included their collective thoughts. Marisol played an important role in providing parents with words and phrases to help make their

thoughts stand out. In addition, the group directed their petition to the school board specifically mentioning the LCFF budget. This letter advocated for a school safety program where a professional would educate parents and children regarding drugs and bullying. In addition, the letter included a comment acknowledging that as Latino parents they are not familiar with how to navigate the U.S. school system, but that they want to help in guiding their children away from bad influences. One interesting observation is how Franco intervened and corrected Marisol when she suggested that the group include in the letter checking students' backpacks for drugs and weapons. Franco noted that the school board would not accept those suggestions and that it would be better to emphasize parent and child education on drug abuse in the letter.

### ***Group Session 3***

During session three, Franco arrived late, coming in at the last few minutes of the group discussion. Marisol started by mentioning that the goal for this meetings was to create a polished version of the first rough draft letter because they were going to present it in front of the class for feedback, but that Franco had the draft letter that was to be polished. Marisol told the class that Franco was on his way, but given the limited time, she suggested that parents attempt to remember what the first letter included. The parents tried to recall a few of the points from the letter but after some time Franco arrived and began to read the letter while Marisol re-wrote it. Even though an image of this letter is not available, video data shows few changes from the initial draft; it was simply a more polished version. Reynaldo even mentioned, "We only changed a little bit." Marisol responded that the letter was not final because they would still have to type the letter and translate it into English.

### ***Group Session 4***

During group session four, Marisol mentioned that she had worked with Franco on their letter outside of the Padres Líderes

program sessions and so she had Franco present the letter to the group at the meeting to see what they thought. Parents seemed to feel good about the content of the letter. Marisol explained that they did not mention the traffic issue in the letter because the school district cannot use these funds for concerns that only the city can fix. Drugs presence *in* schools on the other hand is under the jurisdiction of the school board. She acknowledged that traffic was important for the parents but that she wanted to be sure that their petitions would “fit in” within the LCAP priorities.

### ***Presentation to the School Board***

On the day of the presentation, the school board room was at maximum capacity with several members of parent groups, organizations and the general public signed up to speak in front of the Board and district staff about how they should use the LCAP to prioritize their concerns and petitions. Franco, along with other parents from Padres Líderes, presented their final letter at the board meeting with the support of Padres Líderes coordinators. Parents had the option of reading it in Spanish and having coordinators translate the letter for them. Thus, the parent would receive 3 minutes to speak in Spanish and 3 minutes for the coordinator to translate in English. Franco, despite a limited mastery of English, chose to present to the Board in English.

Franco’s letter mentioned that parents in the school safety group requested that the school board to use funds from the LCCF to implement an effective and active monitoring and prevention program in elementary schools as part of the LCAP in order to prevent children from bringing drugs or weapons to public schools. They also petitioned to have a school police officer present to maintain their children’s safety. In addition, they mentioned that as Latino parents their culture and experience with school systems is very different in the United States so they addressed their need to learn more about the school climate and more importantly, how to

navigate the school system in order to be able to keep their children out of trouble and danger.

### ***Text of the Letter to the Board***

“Good evening, school board members and the public here present. My name is Franco and I have 2 daughters who attend Hill School and I represent the Hill/Maryville Padres Líderes class, which works in collaboration with MALDEF, the College Paths program and the X School District.

First of all, I congratulate the X Unified School District for the effort and commitment they put into the education of all children. I stand before you to ask that with the Local Control Fund (LCAP) more active and effective supervision be assigned to prevent drug use in our public schools. We know there are police officers and prevention programs in middle schools and high schools, but not at the elementary level.

As a parent, it is of utmost concern to learn that students from 4th through 6th grade use drugs at school and during school hours or bring sharp weapons in their backpacks to school. Therefore, with due respect, I urge you to implement an effective and active monitoring and prevention program in elementary schools to prevent children from bringing drugs or weapons to public schools and so they don't continue destroying themselves and other students.

As a Latino parent, I can tell you we come from a culture and a school system that are very different than here in the United States. We would

like to, and we need to learn how a school climate is and to navigate this system which my children belong to, in order to keep them out of trouble and danger.

THANK YOU FOR YOUR ATTENTION AND  
GOOD EVENING,

FRANCO”

## **Discussion**

The three frameworks proved important in making sense of the findings from this case study of a parents group. Critical pedagogy helps us understand human participation in particular streams of activities, in this case parents’ participation in the parent project as social problem solving and civic engagement. The critical pedagogy concept of problem posing is visible as parents named problems in their schools, reflected critically on solutions and implemented a plan of action (to present to the school board). Conscientization, a central component of critical pedagogy here applied to parents and schooling engagement, identifies parents’ participation as a process of developing an understanding of social realities and the realization of the changes needed at their schools. Lastly, critical praxis another component of a critical pedagogy approach holds that social problem solving and civic engagement should be a continuous conversation through reflection upon and action in the world; in the context of this study, it means parents’ participation is not a one-step process but a continuous dialogue aimed at continuing the implementation of change in schools.

In this study, full implementation of critical praxis was a limitation encountered by Padres Líderes. Padres Líderes coordinators and parents did not regroup and discuss the effectiveness of their actions following their presentation of their letter to the school board. From a critical praxis perspective, this

means that parents and coordinators ideally would have met as a group to evaluate actions, assess efficacy, and re-examine the state of the problem. Thus, further research would benefit from understanding parents' actions, their own perception of their actions (during and after *Padres Líderes*), and how this might lead to insights on strategies that could enhance parents' implementation of critical praxis.

The EPE framework demonstrates how parents used their knowledge and experiences from their own lives as a form of capital during the dialogue in the group sessions. These experiences framed the group's conversation and ultimately the general concepts that were included as part of the board meeting presentation. One of the most interesting aspects of the group is that there was constant overlap in speech; parents simply spoke their minds, at times, they disagreed and at other times, they agreed. This demonstrates that the space in which parents interacted did not have strict rules that limited what parents could say to each other and that this absence of constraints allowed parents to more freely express and adjudicate their opinions and ideas.

BMW helps us understand how parents negotiated what to include in their letters and the cultural brokering involved in preparing for the school board presentation. Cultural brokering involved mediating the group's concerns and petitions based on coordinators' knowledge about the LCAP process and current school policies. Cultural brokering also involved exposing parents to the expectations and rules of the board meeting prior to presenting; this is visible in the data where coordinators showed a video of how Latino parents have presented in past board meetings.

Overall, this research highlights the usefulness of programs like *Padres Líderes* to enhance parent participation in school-related policy. First, the goals of the parent project revolved around

the goals of the LCAP: to involve parents in the planning and decision making of the three-year budget plan. Second, parents developed a critical response regarding school safety with the intent of influencing the LCAP. Third, in order for parents to participate effectively in school systems such as board meetings and to engage in policies such as the LCAP, the support of coordinators is evidently necessary because coordinators were able to guide parents towards appropriate actions given their understanding of current policies and school system. In our endeavors to implement effective parent-school programs for Latino parents, we have to focus on constructing spaces where parents can become leaders in their children's education. The parent-school space must involve cultural brokering so that parents can become involved in other spaces such as the school boards.

## **Future Research**

This study would benefit from more data analysis to show quotes and verbatim conversations that reflect the three frameworks operating in the parent project discussions. In addition, future research would benefit from understanding the impact of parents engagement with the LCAP. It would be important to discuss how the LCAP has been implemented throughout the past two years. This project would also benefit from a reflection about other parent engagement programs in the area that also serve Latino parents and the impact they have had on Padres Líderes' recruitment obstacles and strategies.



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**Vivimos en Conflicto (We Live in Conflict):  
University-Induced Displacement in Isla Vista, CA**

**Paola Villegas**

Faculty Mentor: George Lipsitz  
Black Studies and Sociology Department

**Abstract**

*This study examines university-induced displacement in the unincorporated town of Isla Vista, California. In particular, it centers on the mass eviction of long-term working-class Latino families in Isla Vista—a densely populated unincorporated area adjacent to the University of California, Santa Barbara. In the past two decades there have been several instances of landlords evicting long-term residents, particularly Latino families, and leasing renovated units to students at rents almost always out of the reach of families. While eviction is legal, it is important to examine the limited bargaining position of tenants, structural constraints that impede housing mobility, and the long-term impact of eviction on low-income tenants. Interviews with former and current residents, particularly Latina mothers, provide insight into how university-induced displacement exacerbates housing insecurity among Latino families in Isla Vista. Although focused on one locality, this study has larger theoretical and policy implications for the planning and the development of campus-adjacent neighborhoods elsewhere.*

## Introduction

While Isla Vista is predominately inhabited by students, it is also home to over 7,000 non-student residents, including a high concentration of working-class Latino families. Finding housing is particularly difficult for Latino families given the paucity of affordable dwellings, increasing student housing demand, rising rents, and stagnant incomes. Housing insecurity among Latino families is indicative of the socioeconomic disparities in Isla Vista. Since 2002, over 300 residents of Isla Vista have been evicted, the majority of whom have been low-income, long-term Latino residents (Isla Vista Tenants Union 2015). The social and economic vulnerability of Latino families positions them as the group most subject to evictions. The question, then, is why? To explore this question, this study examines the role of inequitable planning and development on the part of the University of California, Santa Barbara (UCSB). Doing so requires careful consideration of the university-community relationship between UCSB and Isla Vista, as well as the role of landlords who issue the eviction notices.

The underlying problem and motivation for this study is the potential negative impact that UCSB's Long Range Redevelopment Plan, which calls for an annual one percent student enrollment increase to the year 2025, will have on long-term resident Latino families in Isla Vista. The study's central argument is that UCSB's growing presence in Isla Vista perpetuates housing insecurity among Latino families in the community. Past research has found that eviction and housing insecurity (overcrowding, frequent moves, exposure to health hazards), contribute to a wide range of health concerns including increased levels of stress, depression, and anxiety among adults and children (Levine, Leventhal, Tama, Lynch, and Kull 2013). Mathew Desmond's work on eviction shows that eviction reproduces poverty by exacerbating housing insecurity within aggrieved neighborhoods, especially among low-income mothers and that these mothers are

more likely to be depressed and to experience higher stress levels from housing insecurity, all of which negatively affect children's cognitive, emotional, and behavioral well-being (Desmond and Kimbro 2015). In thinking about residential instability and its deleterious effect on families and children, UCSB's Long Range Redevelopment Plan holds significant implications for the well-being of Latino families in Isla Vista. This study seeks to provide insight on the negative impact of university-induced displacement by presenting the narratives of displaced Latino families in Isla Vista.

Aside from local newspaper stories documenting evictions, there is little archival evidence of the mass evictions in Isla Vista or the present whereabouts of the evicted tenants. Most importantly, there is relatively little research on, or acknowledgment of, the impact that these evictions had on Latino families. One aim of this study is to move to a more comprehensive understanding of how UCSB's projected student housing demand perpetuates the displacement of Latino families. It is also an effort to document and hopefully help to ameliorate housing insecurity among these families in Isla Vista. The study holds significant implications for the quality of life of Latino mothers and the effects of eviction on their children's health and educational outcomes. Eviction may appear to be a merely inconvenient, finite event, but in the context of poverty and housing insecurity, it can have cumulative and continuing deleterious long-term consequences.

## **Background**

Universities, whether they are public or private institutions, are social, political, and economic agents of change. Universities have been long understood as a public good, yet they have also played a central role in various unsettling university-community disputes, and have had, at various times, even a negative impact on neighboring communities. Among their many roles and functions,

universities are land proprietors and developers. Land is perhaps the single most important determinant of university development on the basis of location, value, and capacity. University-induced displacement cannot be understood without examining the role of land-use regulation and development. In an era where universities are constantly expanding, it is crucial that we pay close attention to the impact of university development on community adjacent neighborhoods, especially when it involves the displacement of existing communities.

While universities have long been considered to be a primary engine driving neighborhood change in surrounding localities, relatively few studies examine university-induced displacement. However, cases of university-induced displacement can be seen across the United States. For example, in the 1960s, several Columbia University students joined residents in the West Harlem neighborhood of New York to oppose the university's plan to build a gymnasium in West Harlem, a predominantly Black and Latino neighborhood (Bradley 2009). Student and community members brought attention to the racist undertone underlying the university's urban renewal agenda, arguing that the project would displace residents and demolish hundreds of affordable housing units. In addition protestors argued that the project would increase housing pressure in an area which many city officials and outside residents considered "blighted" and subject to demolition (Gold and Sagalyn 2010). Protestors were not necessarily against expansion efforts as much as they were against the university's inequitable expansion project.

In response to a more recent expansion project proposed by Columbia University in 2007, one student group stated, "we are for the dissemination of accurate information and equitable, sustainable development practices" (Student Coalition on Expansion and Gentrification 2007: 2). Student organizers pushed for alternative mitigation plans, recommending that the university make changes in zoning to protect commercial areas and increase

residential density codes that would allow the university to build affordable housing for existing residents. These concerted efforts point to the instrumental role that community advocacy plays in bringing attention to the negative impact that university expansion projects may have on surrounding neighborhoods.

Perhaps the concept of university-induced displacement can be better understood by building on the concept of “studentification,” a relatively new phenomenon introduced by Darren Smith to describe high concentrations of students in campus-adjacent neighborhoods in the United Kingdom. Studentification provides a framework through which to examine student growth and migration patterns in towns and cities contiguous to universities. Studentification became a contentious topic given that many residents considered the rapid influx of students to be the underlying cause of major demographic shifts in established neighborhoods, transforming those areas into so-called “student hoods,” (Smith 2005). According to Smith, the reconfiguration or restructuring of existing populations mirrors similar processes and patterns of gentrification, most notably displacement. Research suggests that changes in planning policies and new housing legislation could potentially ameliorate the displacement and/or relocation of existing communities as well as address demographic imbalances (Smith 2005). Studentification can be understood as an emerging process of neighborhood change that can significantly alter the social and physical landscape of campus-adjacent neighborhoods. Smith’s concept helps to illuminate planning and socioeconomic issues in the unincorporated town of Isla Vista, California, home to over 23,000 residents within a one-square mile radius.

### **Latinos in Isla Vista**

In her 1999 “Report on the Quality of Life of Latino Immigrants in Isla Vista,” UCSB Sociology Professor Denise Segura reveals that housing insecurity among Latino families has



been a longstanding pressing issue. Segura's study examined *Single Parent*, *Nuclear Family* (married/partnered and living with children), *Extended Family* (nuclear family plus one or more relatives or friends), *Multiple Family* (two or more related and non-related nuclear families), and *Non-family* households. Across all households, overcrowding, rent-burden, and stagnant incomes were widespread. Slightly over one-third of respondents (37%) lived in *nuclear family households* most of which (84%) lived in one-bedroom apartments with an average of 4.6 people and costing \$604 per month in rent. The survey revealed children often sleeping in the same room as their parents or in the apartment living room. About 20% of respondents reported living in *extended family households* with an average of 6 people per household where multiple incomes helped ameliorate rent-burdens as well as childcare costs as adults or older children often shared childcare responsibilities. Over half of *multiple family households* (60%) lived in two-bedroom apartments with an average of 9 people and \$725 per month in rent. A majority of *single parent families* (67%) lived in one-bedroom apartments paying an average of \$460 per month in rent. The difference in costs reflects subsidized rent provided to one-third of the households in this category. For *non-family households*, the average number of people was 4.6 and rents averaged \$616 per month in rent. These numbers suggest that non-family households also experienced overcrowded conditions due to financial constraints.

Segura's study points to the prevalence of overcrowding in Latino households and raises important questions about household instability and its effects on children's educational and health outcomes. In the context of eviction, these findings hold significant implications about how housing insecurity affects mothers and children, especially Latina mothers who receive government assistance and may find it difficult to secure housing. Segura's study is one of the very few that examine the socio-demographic profile of Latino residents in Isla Vista. The problems that Latino families faced in 1999 still exist today, exacerbated, perhaps, given

the mass eviction of Latino families since 1999. The persistence of housing insecurity raises concern for the well-being of Latino families and their future in Isla Vista.

## **Data and Methods**

This study used a mixed-methods approach composed of archival research, content analysis of qualitative interviews and participant observation. The archival base includes content analysis of local newspaper articles and government records, which provided insight into community responses and public discourse on eviction cases in Isla Vista. Personal contact with several Latino families over the course of three years allowed me to gain insight into landlord-tenants relations and neighborhood change in Isla Vista. Interviewees were seven Latina mothers, four of whom faced eviction in Isla Vista. Pseudonyms were given to each participant to protect their identity. To assess demographic changes, data was drawn from the 2000 and 2010 U.S. Census Bureau.

### ***Isla Vista Demographics***

According to the 2000 U.S. Census, Latinos in Isla Vista comprised 25% out of a total population of 18,000. Isla Vista contained 5,264 housing units, 95% of which were renter occupied households. The percentage of family households was 23% with an average median family income of \$26,250. Census figures show that 340 families earned incomes below the poverty line. By 2010, the number of residents living in Isla Vista had grown by more than 5,000 with renter occupied households making up 97.4% of all households. Yet the total number of housing units had dropped to 5,091, a decrease of 173 units since 2000. One of the largest increases in 2010 was the number of nonfamily households, up 61% from the 2000 Census data, which may likely be attributed to student growth. While the number of nonfamily households increased, the percentage of family households decreased by 7%.

The 2013 American Community Survey (ACS) estimates the total population of Isla Vista is more than 24,600 residents composed of 97.8% renter occupied housing units. The number of families living in Isla Vista is estimated to be 835, of which 339 are Latino families, indicating a decrease in the number of Latino families since 1990. According to the 2013 ACS data, an astounding 79% of residents in Isla Vista allocate more than 30% of their income to rent. According to the U.S. Department of Housing and Urban Development, a renting household or family is considered “rent-burdened” if they pay more than 30% of their household income in gross rent, and “severely rent-burdened” if they pay more than 50%. However, it is important to consider the degree to which tenants are “rent-burdened” relative to their gross income. While some residents may be able to afford to allocate such percentages of their income to rent, others may find it increasingly difficult to do so.

### ***History of University-Induced Displacement in Isla Vista***

In the summer of 1998, 36 Latino families were evicted from the Colonial, Balboa, and Cortez apartments (CBC) in Isla Vista. In response to these evictions and other landlord-tenant issues, the UCSB Associated Students created the Isla Vista Tenants Union (IVTU) to advocate for tenants’ rights in Isla Vista through education and community organizing (UCSB Student Affairs 2000). Eight years later, on August 15, 2006, 55 Latino families living in Cedarwood Apartments located at 6626 Picasso Road were given thirty-day eviction notices (Sadler 2006). Among those who received 30-day eviction notices were 13 residents with Housing Choice Vouchers. These are tenants whose rents are subsidized by the federal government and are entitled by law to a 90-day eviction notice (Sadler 2006). These residents were given new Notice to Quit the Premises on August 26, 2006, per federal housing guidelines; however, the remaining families were asked to comply with the 30-day notice (Santa Barbara Board of Supervisors 2006). In protest, several UCSB students, along with

other community members, organized a campaign against the evictions (Familia Contra La Discriminacion 2006). In October of 2006, students wrote a letter to UCSB Chancellor Henry Yang in support of the evicted families stating the following:

“We demand that the University take responsibility for its impact on the local community. We believe that the University of California, Santa Barbara, is the main driving force in drawing residents to Isla Vista. UCSB administrators must acknowledge the pressure that enrollment of college students is having on the housing market; they must acknowledge that without the University’s presence, the current mass eviction would not be happening (Familia Contra La Discriminacion, 2006).”

In demanding that the university take responsibility for the current mass eviction, students were attributing the displacement of existing long-term Latino residents to the growing presence of the university in Isla Vista. During that same month, UCSB students organized “Tent City Jam Fest,” an event inviting local community members to camp out in front of the campus tower in support of local causes, including the mass evictions (Mullen 2006). Students also demanded that the University contribute to their campaign by soliciting support from donors or alumni. In particular, students asked that the University actively look for replacement housing in or near Isla Vista given that several of the families worked nearby and had children enrolled in local schools. In their search for housing, many families were asked for a minimum income and a security deposit of at least three times the rent amount, which made it increasingly difficult for them to secure housing. The students demanded that the “University put pressure on the landlords in Goleta and Isla Vista to exempt these families from these arbitrary standards” (Familia Contra La Discriminacion 2006).

UCSB Chancellor Henry Yang collaborated with campaign organizers to solicit funds for evicted families by establishing an account, “Families of Cedarwood Apartments,” helping raise over \$25,000. These funds would help pay for unexpected expenses such as security deposits and first and last months’ rent. Despite these efforts, Chancellor Yang did not acknowledge the role of the University in the mass eviction of Latino families. Recognizing the role of the County, UCSB students demanded that Chancellor Yang put pressure on Third District Supervisor Brooks Firestone (whose jurisdiction then extended to Isla Vista) regarding the implementation of a Just Cause Eviction Ordinance (Ferry 2006). Firestone responded: “The question is, ‘what can we do? We cannot find anything else to do that we can do—even though we want to” (Ferry 2006). County Supervisor Firestone was pointing to the lack of local tenant rights policies.

Despite limited legal authority, the County formed a task force “to assess the situation and determine what could be done within the County’s authority, and in conjunction with other agencies, provide assistance to the residents of the complex” (Santa Barbara Board of Supervisors 2006: 3). Members of the Board of Supervisors wrote to Governor Arnold Schwarzenegger in support of AB 1169, a bill that required that landlords give 60 days notice before terminating the lease of a tenant who has lived in a unit for one year or longer, or 30 days notice for a tenant who has resided in the dwelling for less than one year. AB 1169 was signed and put into law on January 1, 2007 (McManigal 2006). This act gave all local Isla Vista evictees extended time to secure housing.

The tenants, with the support of IVTU, filed a lawsuit against Conquest Student Housing, a company that provided student housing in Isla Vista. On November 1, 2006, evicted Isla Vista tenants accepted a settlement that consisted of return of their full security deposit, no eviction shown on their records, and a one

month extended period of time to relocate. The attorney representing the evicted families in Isla Vista argued that the evictions were a case of housing discrimination given that more than 90% of the tenants were Latino families (Crecelius 2006). John Greenwood, the lawyer representing Conquest Student housing, said that “several people have investments in the remodeling of the apartments and Conquest needs to begin construction before the rain starts in January... Conquest has a responsibility to its banks and investors” (Crecelius 2006). Luz Silvia, one of the evicted tenants told the lawyer, “December 30, all we’re asking for is 30 more days...where are we going to find a place? Think about the children, think about what you’re doing to the families” (Crecelius 2006). Greenwood responded, “This is a business decision only, and we need possession by December 1<sup>st</sup>. It is sad that people have to move, but they do and we can offer no more time” (Crecelius 2006). Eviction notices issued by Conquest Student Housing were also widespread in the neighborhood surrounding the University of Southern California (USC) where long-term working-class residents have also experienced eviction and displacement (Crecelius 2006; Vincent 2012).

In April 2012, Platler Capital Management purchased the apartment complex located at 781 Embarcadero Del Norte in Isla Vista (Staff Report 2013) and gave existing tenants a notice that rent would increase by 10% by May 1, 2006. That same month, 16 low-income Latino families, after having received a rent increase notice, also received eviction notices. Multiple tenants had offered to pay the construction costs of remodeling their apartments as well as the increased rent; however, Platler refused and proceeded with the evictions (Staff Report 2013). A local reporter who interviewed evicted tenants found that they were severely distressed, which negatively affected their health and living conditions (Gripenstraw 2012). For example, Lorena Garcia who had lived there for almost 17 years with her 84 year-old husband who suffered from Alzheimer’s moved to a garage because they couldn’t find housing within the allotted time given their financial

constraints. Garcia noted that the eviction caused her stress and anxiety. Garcia's story raises questions about the hidden costs that eviction levies on tenants, such as unexpected or unintended healthcare costs.

Another resident, Victor Balbuena, an employee at local Isla Vista and Goleta Subway Restaurants, reported that he and his children (ages 9 and 12) who were raised at the property were traumatized by the experience. Despite being entitled to 60-days notice, Balbuena stated that Platler consistently urged the tenants to leave before their scheduled lease termination. Jorge Avila, who lived with his cousin and father, noted that a month after Platler had purchased the apartment complex, their rent increased from \$975 to \$1,300. Tenants also received notices requiring residents to purchase \$50 parking permits. Avila, an employee who worked late night shifts at a local restaurant in Isla Vista mentioned that the construction was a great disturbance, often forcing him to sleep in his bathroom due to the noise nuisance. Gloria Silva, who had been offered \$500 to leave her home of 8 years before her scheduled lease termination, notified IVTU of her eviction notice and reported that she would often find construction workers inside her apartment unit when she got home from work.

IVTU informed Platler Management that evicted tenants were entitled to relocation compensation in accordance with County Ordinance 4444, amended in 2010 by the Santa Barbara Board of Supervisors, in response to community organizations that advocated for policies that would strengthen the rights of tenants, especially considering the mass eviction patterns in Isla Vista (Gripenstraw 2012). Prior to 2010, Ordinance 4444 only provided relocation assistance when a tenant was displaced due to health and safety violations. Amendments to 4444 expanded "relocation assistance in situations where there is a demolition of any rental unit on the lot, when the planned alteration or rehabilitation requires a permit and reduces the number of rental units on the lot, and when there is a change from a residential use to a

nonresidential use” (Meagher 2010). In response to the evictions, several families and student residents of Isla Vista held rallies outside of the apartment complex and circulated petitions to protest the evictions (Staff Report 2013).

In August 2014, six low-income Latino households located at 6754 and 6764 Abrego Rd. were given 60-day notices to vacate their units (Mounteer 2015). Abrego Apartments issued the eviction notices for property owner Majestic Asset Management, an out-of-town private company. All of the units were renovated and leased to students who were paying over 50% more in rent than former evicted tenants (Mounteer 2015; Brennan 2015). The evicted tenants were informed by IVTU that their eviction could be in violation of County Ordinance 4444, which entitles evicted tenants to relocation compensation. The evicted tenants asked Majestic Management for relocation benefits in accordance with Ordinance 4444. Their request was denied. The tenants then filed a lawsuit against Majestic Management. Three months after the eviction notices were issued, Majestic Management retracted the eviction notices for three of the units; however, the tenants could not afford to pay the higher rent. In addition, evicted tenants had already secured housing (Brugger 2015). Majestic’s attorney said that although the company prefers student renters, it does not discriminate because it welcomes anyone who pays market price.

While the Ordinance enabled the evicted tenants to take legal action, it is important to note its limitations. After months of negotiations, the tenants and Majestic settled, giving relocation compensation (an undisclosed amount) to five of the six tenants (Zimmerman 2015; Knorp 2015). The one household exempted from this settlement was the only one not within the same apartment complex as the other evicted households. The tenants’ attorney stated that according to the Ordinance, “eviction of less than two units from any apartment is considered legal because it does not force multiple groups of people to search for a limited number of available houses at once” (Zimmerman 2015). In order



to avoid triggering Ordinance 4444, Majestic Management was selective and deliberate in the number of tenants they evicted and ensured that the renovations they initiated did not require permits (Brugger 2015).

### ***Narratives of University-Induced Displacement***

All interviewed tenants, seven former and current Latina mothers living in Isla Vista, immigrated to the United States from Mexico. Like many immigrants, these mothers migrated in hopes of a better quality of life for their families, as articulated by Susana: “Our country's desperate socio economic situation forces us to immigrate as a means of survival.” When asked why they chose to reside in Isla Vista, all respondents noted that they did not necessarily choose to live in Isla Vista. They came to live there because they had a family member who provided them with housing and a job within or near the area. Finding housing in Isla Vista is no simple task given the limited amount of available and affordable apartment units. These Latina mothers all faced several challenges securing housing in Isla Vista, especially given that the majority of them are undocumented.

When Amalia first arrived in Isla Vista, she rented a closet for \$200 with just enough space to lie down and sleep. Finding housing was particularly difficult for her because many landlords required proper legal documentation of citizenship, which Amalia could not provide. While Amalia had a brother already living in Isla Vista, she did not move in with him because at the time, he lived in an overcrowded two-bedroom apartment with more than 15 people. Amalia explained that they lived in severely overcrowded conditions because it was expensive to live on their own and many wanted to save money to send back to their families in Mexico. To be able to secure housing in Isla Vista, Amalia worked two jobs; she would get off one job at 6:00AM and ride her bicycle to get to her other job at 7:00AM, sometimes working more than 18 hours a day. After five months of saving money and

searching for housing, Amalia was able to secure the unit where she rented the bedroom to her nephew, while she and her son slept in the living room.

Vicky moved to Isla Vista in 2004 where she found a job in the same local restaurant where Amalia worked. Like Amalia, Vicky also had a difficult time securing housing because she could not provide legal documentation. In addition, property managers asked her to provide proof of income. Vicky knew that if she told management how much she made per month earning minimum wage at the time, she would not qualify and therefore lose the apartment. In desperation, Vicky asked her manager at the restaurant to lie about her earnings in case the apartment manager called him, which he did. Vicky was able to secure the apartment where she rented the bedroom to another resident in order to afford rent. Vicky lived in this unit for ten years until she received an eviction notice. Vicky explained that she and the other tenants who received an eviction notice asked for an extension; however, the manager was reluctant to grant the extension and told her to look for housing in the Goleta Valley area. A few months after receiving a 60-day eviction notice, Vicky was told that if she wanted to, she could apply to stay, but would have to pay market price, \$1,500 for a one-bedroom apartment. This was nearly a 50% increase from what she previously paid \$1,025. While Vicky was given the option of applying for an apartment unit, she could not afford to pay the increased rent.

### ***Discriminatory Housing Practices***

Questions of discrimination arise given that the majority of previous mass eviction cases in Isla Vista have targeted long-term, working-class Latino families. Do landlords engage in discriminatory housing practices? Do Latino families face discrimination based on their household size or citizenship status? When Amalia found a one-bedroom unit, the manager told her that she had to pay a month and a half more in rent because she could

not present a social security card. While the manager typically asked for \$850 in rent and security deposit, Amalia had to pay \$1,250, more than 40 percent of the initial cost. The fact that the landlords ask for proof of citizenship or residency calls into question how landlords go about choosing tenants. Landlords in Isla Vista have significant leverage because they know that housing is a scarce resource. Speculative student housing demand only compounds housing insecurity for Latino families because landlords are aware that student housing represents fixed capital despite being a transient population. However, the same could be said about long-term Latino families who, unlike students, tend to live in Isla Vista for several years. When asked why they thought this was the case, one interviewee, Beatrice, responded:

“Students, some, not all, come from families who have money, and secure housing more easily. Many leave in a year and the owner gets the apartment back, renovates it, and increases rent. It is not convenient for owners to lease to families because we are long-term residents. This only makes it even more difficult to secure housing.”

Implied in Beatrice’s response is the notion that landlords do not want to rent to long-term families because they can increase profit if they rent to students where the turnover is high. When asked the same question, Carla stated that while she knows that there is tension between students and families who often are forced to compete for housing, she understands that students, like Latino families, also face housing insecurity.

Housing insecurity among Latino families is compounded by the fact that many have month-to-month leases. All interviewed tenants noted that their apartment managers did not provide them with the option of yearly leases. When asked if she had been offered the option of a yearly lease, Beatrice said no, “It

was monthly lease or no lease at all.” When asked if she felt that she has to compete with students for housing, Beatrice noted:

“Students who attend the university know they have to secure housing. There are students who come from wealthy backgrounds and then there are students who come from less wealthy backgrounds. For landlords, it doesn't matter whether you are rich or poor. All those who have money and those who have no money have to search for a place to live.”

Latino families in Isla Vista rely on rich social networks. In the case of eviction, Latina mothers like Vicky drew from their social networks to secure housing. For Vicky and other mothers, displacement disrupts social networks, especially when families are forced to move to an unfamiliar neighborhood. Susana noted:

“Isla Vista has its advantages and disadvantages, but in terms of housing, rent is very expensive, we have to live in overcrowded conditions in order to afford rent. However, here [in Isla Vista] there are jobs. If you move away from here it's like starting from zero; one has to look for work, new schools for your children and new friends.”

Like Susana, other mothers made observations of the importance of social capital. Beatrice who has lived in Isla Vista for more than two decades depends on her social networks in order to be able to sell her tamales. For Yvette, social capital has allowed her to engage in mutually beneficial support systems. As a mother of six children, Yvette emphasized the importance of having people she can trust in case she ever needs childcare. Moreover, social capital is regarded as an asset that these Latina mothers can draw on and benefit from in various situations.

## *Landlord-Community Ties*

Common among the mothers who faced eviction was the fact that their eviction was due, in large part, to change of management. These mothers did not have a previous landlord-tenant relationship with the new landlord who issued the eviction. On the other hand the mothers who have not experienced eviction have been under the same management for years. The point worth examining here is the relationship between landlords and tenants. Three of the mothers I interviewed currently live in the same apartment complex among other Latino families. In August of 2015, a YouTube video had surfaced on the web to promote the sale of the apartment complex. The title of the video consisted of the address of the apartment complex followed with “for sale.” All tenants in the apartment complex were aware that the building was up for sale prior to the video. Given the prevalence of eviction among Latino families, these tenants feared being displaced. Interviewees mentioned that private owners interested in purchasing the building would often visit the apartment complex. For many Latino families in Isla Vista, like Carla’s, their apartment unit has been their home for years. Their unit represents more than just a commodity; it is place where they have created many memories and therefore have attached meaning to the space. Carla mentioned that she among other neighbors were grateful to have a landlord who allowed them to rent the unit despite knowing that they lived in overcrowded housing conditions, and did not discriminate against them.

“The owner is an excellent person. I think all who live here are very grateful to have him as a landowner. Yes, he did increase rent—\$200 this January—but there are other places where you pay a lot more rent and it only keeps increasing. It is a place filled with families. Many landowners no longer want to lease to families. Isla Vista is

becoming a place for students only. However, this is one of the very few places where I see that families still live. We are happy, but also concerned that many places are pushing families out of Isla Vista. It is clear that many landlords do not want to lease to families with children when they can lease to students at much higher rents.”

Carla has lived in Isla Vista for over three decades. During her time in there she has lived in this apartment complex with the same landlord for 25 years. According to the tenant, this particular landlord is different from the rest in Isla Vista because the landlord understands that “the majority of Latino families in this apartment complex cannot afford to pay such high rents and are forced to live with more people to afford housing.” More than one respondent expressed relief that this landowner has not evicted families, especially given that many investors have shown interest in purchasing this apartment complex. As suggested by Carla, this landlord may have decided to not evict his tenants precisely because he understands that this is one of the few buildings and streets where there is a high concentration of Latino families. The YouTube video posted by an unknown user is no longer online and the tenants did not receive a notice of eviction as feared. Instead, all tenants of this apartment complex received a notice detailing a ten to fifteen percent rent increase.

Latino families are keenly aware that irrespective of their housing tenure, their home, at least the physical space, is not their own. Carla emphasized this point when she said that like her neighbors, she appreciated the fact that their landlord raised rent instead of evicting the families in her apartment complex. Nonetheless, the rent increase exacerbated housing insecurity concerns for Carla who earns about \$1,050 per month, but must pay \$1,550 in rent. To supplement her income, Carla works additional late night shifts. Carla was previously paying \$1,350;

this rent increase clearly contributed to her economic burden. This is the case for all interviewees the majority of whose money goes to rent. In the context of long-term housing insecurity, any slight rent increase has the potential to significantly and negatively impact tenants. Carla's experience provides insight on the importance of building social ties with landlords. While tenants in this apartment building experience landlord negligence, for example, dismissal of complaints or maintenance requests, they nevertheless consider him to be a "good" landlord because of their long-term landlord-tenant relationship. Furthermore, exploring and working toward building community ties between landlords and tenants in Isla Vista may have a positive impact on the overall sense of investment and commitment to ameliorating housing insecurity in Isla Vista.

### ***The Impact of Housing Insecurity on Tenants' Health***

A prevailing sense among all respondents was the negative impact of housing insecurity on their health. This finding is in line with studies that have linked eviction and housing insecurity to a wide range of health concerns including increased levels of stress, depression, and anxiety among families and children (Coley, Leventhal, Lynch and Kull 2013; Desmond et al. 2015). The threat of eviction alone negatively impacted tenant's health. Eviction disrupts every aspect of daily life including having to find the time to look for housing, which is especially difficult during the academic year when the vacancy rate in Isla Vista is at its lowest. When asked if the threat of eviction impacted her health, Carla responded:

“It was stressful. I kept asking myself what I was going to do. Where would I find housing? My children told me not to worry. If I could not find housing in Isla Vista, I could always move to Lompoc or Santa Maria, but it is not that simple. I work late at night and as a woman I always have to be aware of my surroundings. I could not sleep because I was so frustrated and stressed.”

Another challenge that Latina mothers face in securing housing in Isla Vista is the difficulty of finding a landlord willing to lease an apartment unit to a large family household. Because private developers built to accommodate students, the majority of buildings in Isla Vista are one or two-bedroom apartment units. For a family of eight, such as Yvette’s, finding adequate and affordable housing that will accommodate her family is particularly difficult.

When Yvette first moved to Isla Vista in 2001, she didn’t have much trouble finding housing for her family of five. A year after moving to Isla Vista, Yvette received a 30-day eviction notice. At the time, Yvette had just recently given birth to twins. The eviction notice came as surprise to her because she and her husband had always paid their rent on time. Yvette was fortunate enough to find a unit in a nearby apartment complex, the same apartment building where Carla and Beatrice live. Yvette had lived in this apartment complex in a one-bedroom apartment with her family of eight for more than a decade. Like Carla, Yvette, received an eviction notice. When asked how the threat of eviction impacted her, Yvette said that she worried for her children, “Where am I going to find an apartment that accepts my family?” Having faced eviction before, Yvette feared that she would experience severe depression as she did when she received her first eviction notice in 2002. In addition, Yvette worried that her children would need to move from their current school.



Like Yvette, Vicky also experienced depression after being evicted. As an undocumented mother, Vicky faced additional challenges when looking for housing in Isla Vista. Having had her son deported to Mexico few years ago, Vicky longed to see him again. However, Vicky expressed that while she aspires to return to Mexico, she does not plan to go anytime soon because she needs to work to pay off her medical bill expenses. Vicky shared:

“At the root of my concerns was the thought of where I was going to live and with whom I was going to share a room, a house, or an apartment. All these concerns negatively affected my health... I had insomnia, it was all very stressful...It wasn't until my face was paralyzed that I was able to sleep again after taking medication. It was like the bomb that exploded. I feel better, a little calmer, but it took me an entire year.”

After the eviction, Vicky's health deteriorated, however, because she does not have access to healthcare, Vicky has to pay out-of-pocket for medical services. Currently her medical bill is more than \$2,000, which only contributes to her stress. Vicky would like to seek medical services more often but fears adding to her debt. For Vicky, her first priority is to pay rent.

“Working-class Latinos try to save up money in order to pay rent despite not having enough money for other expenses. We do it because we want to fulfill our commitment as tenants. I would much rather have money for rent and survive on what I have left in money. To this day, I always ensure that my rent is paid first before anything else.”

Tenants fear that a late payment will provide sufficient reason to be evicted despite having a longstanding good tenant record. All respondents stated they prioritize paying their rent before any other living necessities because they are aware that Latino families are increasingly vulnerable to eviction.

While default on rent is in fact a legal reason for evicting a tenant, it is not the underlying factor driving the mass eviction of Latino families in Isla Vista. The question, then, is why are Latino families being evicted in large numbers? Part of the reason lies in the fact that landlords have the right to evict a tenant. However, the landlord who, for example, collects rent with no regard to the socioeconomic background of tenants is of great concern for various reasons. Rent, as defined by David Harvey is “a payment made by a user for the privilege of using a scarce productive resource which is owned by somebody else” (240). Rent is the primary factor linking landlords and tenants; it’s a transaction based on capitalistic principles. A landlord’s primary concern is to collect rent from tenant every month with the expectation that tenants will pay on time and in full. How residents go about securing the funds to pay rent is less of a concern to landlords. This, however, is a social element worth examining.

### ***Priced Out of the Market***

Since the last mass eviction in 2014 there have been no reported cases of mass eviction of Latino families. However, drawing evidence from participant observation since then, Latino families have continued to be displaced. Monica, an undocumented mother noted that after her apartment complex changed managers she received a notice of rent increase. The new out-of-town private owner of the apartment complex has several properties across the state of California. Monica’s rent initially increased by \$500, but she was later told that because the manager wanted to make renovations to the apartment, rent would increase by \$800. Unable to afford the rent, Monica and her family had to find another

apartment unit. Because this apartment complex is located on a street where there is a high concentration of Latino families, Monica and her families were able to secure a month-to-month lease with a different company in a building right across the street. Month-to-month leases leave families with significantly less leverage by subjecting them to potential sudden rent increases from one month to the next or termination of their lease. In this instance, eviction was not prevalent; however, the mechanism used by landlords to vacate their unit contributes to the displacement of Latino families.

## **Discussion and Conclusion**

While eviction is legal, it is important to note the limited bargaining position of tenants, structural constraints that impede housing mobility, and the long-term impact of eviction on Latino families. Evicted families are in a competitive disadvantage when looking for housing in Isla Vista. Finding substitute housing within their budgets is particularly difficult. Thus, many look in other housing markets, such as Lompoc and Santa Maria where it is possible that they may encounter varying aggregate levels of discrimination. Eviction and rising rents force Latino families to prioritize housing and give less weight to other household and neighborhood characteristics. The key point here is that eviction undermines the “geography of opportunity” by giving Latino families little say in where they would like to live (Rosenbaum, Reynolds, and Deluca 2010).

Equally important is how housing insecurity or residential instability affects children’s educational outcomes, especially considering that past evictions have taken place during or weeks before the start of the school year for the children of evicted tenants. The narratives of evicted Latino families in Isla Vista illustrate how housing insecurity negatively affects their health and disrupts their children’s education. In addition, this study points to the prevalence of overcrowding in Latino

households, which raises additional significant questions about household instability and its effects on children's educational and health outcomes. Recent research shows that "poor housing quality is the most consistent and strongest predictor of emotional and behavioral problems in low-income children and youth" (Coley et al 2013). In addition, gender wage gaps may compound the negative cumulative effects of eviction.

Although respondents were able to find housing within or near Isla Vista, displacement may lead evicted tenants to relocate to new neighborhoods where they might not necessarily have the social or community networks that they had in their former neighborhood. Additionally, financial constraints, in many cases, force evicted tenants to live in inadequate conditions, sometimes in worse conditions than they formerly did. While evicted tenants may secure housing within the same neighborhood, others are forced to find housing in different neighborhoods due to high rents, limited availability, or specific eligibility requirements. These findings hold significant implications for the impact of eviction on low-income Latina mothers, especially when considering legal constraints experienced by undocumented single mothers in Isla Vista.

Presenting the perspective of long-term Latino families is important, as they are key stakeholders in the community of Isla Vista. As aforementioned, universities are powerful social, political, and economic agents of change. The neighborhood change brought by expansion of UCSB, whether positive or negative, shapes the social and spatial structure of Isla Vista. Planning and housing legislation in Isla Vista has a history of working in favor of the developers and property owners, while undermining tenants' rights. However, UCSB is uniquely situated to not only mitigate but also prevent inequitable planning and development in its immediate surrounding locality. A focus on the role of planning and local legislation encourages us to consider how social inequalities are institutionally upheld, but also how

changes in legislation on all levels of government can ameliorate social inequalities and improve the quality of life of Latino residents.

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# Understanding Academic Resilience: Latina Community College Transfer Students' Experiences

Adriana Sánchez

Mentor: Dr. Melissa L. Morgan-Consoli  
Department of Clinical, Counseling, and School Psychology

## Abstract

*The current pilot study explores the factors that contribute to academic resilience in Latina community college transfer students at a public, Hispanic Serving Institution (HSI) on the West Coast of the United States. Latina/os are more likely to enroll in two-year colleges than any other group (Fry, 2002), yet it is estimated that only eight percent of Latina/o community college students complete a bachelor's degree within six years of first enrolling in a United States community college (The Completion Arch, 2014; National Center for Education Statistics, 2011). Due to challenges at the community college level, not all Latina/o students complete their community college coursework and successfully transfer to a four-year institution to continue their educations, or become academically resilient. Academic resilience is the ability to effectively deal with setback, stress or pressure in the academic setting (Martin & Marsh, 2009). To further understand this phenomenon, and how it may influence the lives of these students, we explored the topic through semi-structured interviews with Latina-identified community college transfer students. Interview transcripts were analyzed using Moustakas' (1994) transcendental phenomenological approach, and preliminary findings revealed five emergent themes linked to academic resilience: Developing Self-Efficacy, Having Mentor Support, Reaching Maturity, Aspiring to Be a Role Model, and Desiring to Pay It Forward. The paper discusses implications for counselors, faculty and research, as well as making recommendations for community college transfer programs.*

## Introduction

Community colleges frequently serve as an entry point to higher education, especially for low-income, first generation, and racial/ethnic minority students (Campa, 2010; Jenkins & Flink, 2015). While Latina/os represent the largest ethnic minority group enrolled in community colleges, they are among the least likely racial and ethnic group to transfer from a two-year/community college to a four-year university and complete a bachelor's degree (Fry & Lopez, 2012; Fry, 2004; Fry, 2002; Osegura, Locks, & Vega, 2009). Lower tuition costs and less rigorous entrance requirements than in the four-year universities entice them to enroll as a start to their higher education (Fry, 2002). Yet it is estimated that only eight percent of Latina/o community college students go on to complete a bachelor's degree within six years of first enrolling in a U.S. community college, as compared to thirteen percent attainment of bachelor's degree for White Americans and nineteen percent for Asian Americans (The Completion Arch, 2014; National Center for Education Statistics, 2011).

In general, community college students face many obstacles on the road to a degree. For example, many students entering college are not academically prepared for college level work, therefore requiring students to take prerequisite courses that prolong their time at the community college level (Fry, 2002). Latina/o students face additional obstacles, including heightened worry about financing their educations due to financial pressure to support their families (Lopez, 2009) and family and work obligations that often pressure students to enroll part-time, also prolonging their undergraduate careers at the community college level and hindering degree attainment (Fry, 2002). In addition, research indicates that many of these students experience poor counseling and/or negative interactions with counselors who hold lower expectations of Latina/o students (Solorozano, Villalpando, & Osegura, 2005), as well as some increased vulnerability to

stereotype threat for community college transfers of minority background. Experiencing stereotype threat influences students to try to avoid confirming a negative stereotype associated with their group and can distract from their education (Oseguera, Locks, & Vega, 2009).

On January 8, 2015, President Obama proposed making the first two years of community college free for responsible students. The president's proposal may increase the numbers of such students. The potential of this growing population in our community colleges makes it even more important to understand the challenges they face and what might help them become academically resilient. Furthermore, with an increasing Latina/o population, Hispanic Serving Institutions (HSIs), which are colleges and universities with at least twenty-five percent Latina/o student enrollment, would benefit from such information and could be helpful in developing programs to assist other Latina/o community college in accessing supportive environments in which they may continue their educations. HSIs could better learn how to serve, educate, and support their students in closing the gaps in educational attainment by promoting enrollment and increasing retention efforts, especially since more than fifty-four percent of U. S. Hispanic<sup>1</sup> college students are enrolled at HSIs (Calderon Galdeano, Flores, & Moder, 2012).

Although previous research has documented the barriers to academic success in traditional Latina/o college students, less research exists on the barriers to transfer for Latina/o community college students. Moreover, there are few studies on the positive factors that counteract these negative influences. This current pilot study attempts to contribute to the small amount of research that

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<sup>1</sup> Latina/o is used in this article to refer to people of Latin American descent. Some articles use Hispanic as a term to refer to people of Spanish speaking descent in general. When other sources use Hispanic, the term will be used.

explores the particular strengths that may help these students overcome adversities. It is important to hear the stories of students who successfully make the transition from a community college to a four-year institution and learn what helped these individuals overcome the obstacles and be academically resilient.

## **Background**

### ***Community College Students***

There are differences between students who attend a community college and those who attend a four-year university right after high school. For example, in contrast to four-year universities, community colleges enroll a higher percentage of low-income, non-traditional, and non-white students who also often take classes part-time due to work or other responsibilities. Studies have shown that students who attend community college part-time are more likely to miss class and fall behind in their courses due to non-school related responsibilities (Fry, 2002). Differences in students' income level and enrollment status are important to an understanding of the difficulties and barriers that transfer students face.

Community colleges appeal to Latina/o students due to the lower tuition cost and their locations. Community colleges are often located in residential areas, which allow Latina/o students to remain close to family, an important value shared by most Latina/os (Fry, 2002; Martin, Galentino, & Townsend, 2014). This means that community college students frequently commute to and from school as opposed to living on campus as do most students who attend a four-year university. While there are benefits to enrolling at a local community college, like saving money by living at home and staying close to family, there are also disadvantages that hinder students' goals of transferring to a four-year university and of attaining a bachelor's degree, such as assuming greater responsibilities at home in addition to keeping up

with academics. Eighty percent of community college students intend to earn a bachelor's degree, but only twenty-five percent of these students transfer to a four-year university and even fewer, a significantly lower seventeen percent, complete the intended degree (Jenkins & Flink, 2015).

### ***Barriers to Academic Achievement for Latina/o Community College Students***

Many of the barriers that Latina/o community college students face in their paths towards higher education make it difficult for them to persist. For example, in a case study consisting of interviews with students, faculty and administrators, Ornelas and Solorzano (2004) highlight the extent to which Latina/o community college students are often overwhelmed with balancing multiple roles in the school and home setting. For example, they found that males in a Latina/o household with a missing father figure often have to become the primary income earners while also carrying the responsibility of taking younger siblings to and from school. Females may take on a mothering role by becoming responsible for cooking, cleaning and taking care of younger siblings. While students may be close to their families and saving on tuition by attending a community college, the researchers highlight that the burden of these additional roles can lead students to become discouraged with their educations.

Many Latina/o students in community colleges enroll part-time in order to meet these responsibilities. Additionally, researchers suggest that their K-12 education has not prepared them well for college, which then requires them to take prerequisite courses before enrolling in appropriate college-level transferable courses (Crisp, Taggart, & Nora, 2014; Fry, 2004; Jenkins & Fink, 2015, Lopez, 2009; Ornelas & Solorzano, 2004; Osegura, Locks, & Vega, 2009). This discourages students from persisting because it prolongs their time in community college.

Another barrier that community college students face is inadequate college counseling. Inadequate community college counseling, for example, might consist of counselors misinforming students that completing an associate of arts degree will also fulfill the requirements for transferring to a four-year university. Omissions such as this occur in the absence of a “transfer culture.” The lack of such a culture has been found to be important in that it signifies community colleges do not place an emphasis on students transferring, nor do they provide academic guidance and well defined transfer procedures for students. In addition, instructors and counselors may have low expectations for Latina/o students that may result in directing them into vocational careers instead of college transfer (Ornelas & Solarzano, 2004; Solorzano, Villapando, & Oseguera, 2005).

Numerous studies of Latina/o college students reveal that variables such as the campus climate or university environment, financial concerns, discrimination, and the lack of information regarding higher education contribute to the low bachelor’s degree attainment among this population (Castillo, Conoley, Choi-Pearson, Archuleta, Van Landingham, & Phoummarath, 2006; Cavazos, Johnson, Fielding, Cavazos, Castro, & Vela, 2010; Museus, Nichols, & Lambert, 2008; Wang, 2009). Osegura, Locks, and Vega (2009) suggest that Latina/o students also face stereotype threat as a barrier to academic achievement. Stereotype threat may influence Latina/o students’ self-efficacy beliefs and intentions to drop out of college. In addition, Latina/o students’ satisfaction with campus racial climate has been found to be directly related to degree completion (Museus et al., 2008). Discriminatory campus experiences, which lead to feelings of isolation, and negative interactions with school officials, are barriers that Latina/o college students commonly face (Crisp, Taggart, & Nora, 2014). Therefore, the less prejudice and discrimination students experience on campus and in the classroom, the greater the chance of persistence and degree attainment in the academic setting.



## ***Latina/o Community College Student Strengths***

While many studies of Latina/o community college students focus on deficiencies rather than strengths of the individuals, a few studies have employed a more strengths-based model. Zell (2010) examined the psychological and subjective experiences of fifteen Latina/o community college students aged 22-44 years who had transferred or were in the process of transferring to a four-year institution in the Chicago area. Zell found that the experiences of Latina/o community college students do not only consist of hardship and concern. Her findings emphasized that individual growth and rewards also accompany their experiences. For example, she found that having a sense of purpose, continuously strategizing, and family guidance about the importance of education were common themes among the Latina/o community college students in the study. This is consistent with other findings that indicate that many Latina/o students are able to reduce the negative effects of environmental and personal circumstances and adapt to difficult events while pursuing their education (Arellano & Padilla, 1996; Bernard, 1995).

## ***Latina/o College Students and Resilience***

Resilience, in general, is defined as the process or capacity of adapting to challenges or threatening circumstances (Masten, Best, & Garmezy, 1990). According to Martin & Marsh (2009), academic resilience is the ability to effectively deal with setback, stress or pressure in the academic setting. They propose four factors that predict academic resilience: self-belief, control, low anxiety, and persistence, all of which educators can help foster in students.

In a recent qualitative study with Latina/o college students, Cavazos et al (2010) interviewed eleven Latina/o undergraduate students from a Hispanic Serving Institution in the southwestern United States on their perceptions of what influenced their high

academic achievement. Based on participant responses, the researchers found that setting goals, having strong interpersonal relationships, intrinsic motivation, internal locus of control, and self-efficacy are significant contributors to academic achievement. Furthermore, the authors concluded that while goal setting is important for academic success, self-efficacy or believing one can accomplish one's goals plays a greater role.

In addition to the positive protective factors discussed above, social support has been identified as a buffer to challenges of college adjustment. Specifically, *familismo*, or belief in “family first” and family support, is an important aspect in Latina/o students’ overcoming adversity (Morgan-Consoli & Llamas, 2013). In particular, students who perceive social support from family members seem to have a greater potential for thriving, or being “better off” after adversity. Also, having a strong sense of ethnic identity and individual drive to succeed (Castillo et al, 2006; Devos & Cruz, 2007), as well as having *ganas*, or honoring parental struggle and sacrifice (Easley, Bianco, & Leech, 2012), have been found to play important roles in the successful achievement of higher education for Latina/o students. Easley, Bianco, & Leech (2012) describe *ganas* as a multiple component trait, which includes students’ acknowledgement of parent’s struggles and sacrifices, valuing family and family history, respect and admiration for parents, a desire to repay, and resilience.

Faculty and counselors also play a part in encouraging and inspiring students to achieve academically (Zell, 2010). According to a study on support programs related to Latina/o community college students’ success, student interaction with faculty outside of class had a small but significant impact on GPA. In other words, the more times a student met with faculty members, the higher the GPA the students achieved (Tovar, 2015). Similarly, other research has shown that students, faculty, and administrators all attribute academic success to Latina/o students having clear goals, strong motivation, and the drive to succeed the ability to manage external

demands, and self-empowerment, which offset the negative influences and adversities in the students' academic environment (Martin et al., 2014). Findings such as these can inform colleges and universities with high Latina/o student enrollment how to better assist and provide these students with safe and supportive environments that foster growth.

The purpose of this study is to explore the following research question: What contributes to the phenomenon of academic resilience in Latina/o community college transfer students? The study builds on and adds to the small body of extant literature about the experiences of Latina/o college transfer students by using a strengths-based, resilience lens to explore positive factors that may contribute to academic resilience in Latina/o community college transfer students at a public, Hispanic Serving Institute (HSI) on the west coast of the United States.

## **Method**

### ***Researcher***

The researcher is a first generation undergraduate college student. She identifies as a Mexican-American female. Her interest in conducting this study emerged out of her own personal experience in transferring from a community college to a four-year university. She is interested in exploring the factors and/or characteristics that make other Latina/o community college transfer students academically resilient, despite facing adversities in the academic setting. Her supervising advisor is a faculty member and counseling psychologist who identifies as a mixed ethnicity (Mexican/European) female.

### ***Participants***

Participant criteria for this pilot study included: 1) being eighteen years of age or older, 2) being a community college

transfer, and 3) self-identifying as Latina/o. Upon receiving approval from the university's Institutional Review Board, the researcher recruited participants from various Latina/o campus organizations and transfer alliance clubs by posting information about the study on several university group and social media pages. Interested participants contacted the researcher via email to set up an interview. Participants chose the location of the interview (e.g. quiet sitting area on campus, coffee shop) according to what was convenient for them.

Four female students ages 18-24 responded to the call for participation in the study. Three participants were seniors, and one had recently graduated at the time of her interview. All were first-generation college students, although this was not part of the specific participation criteria. Each participant was given the opportunity to choose a pseudonym in order to protect their identities, and all four participants decided to allow the researcher to choose the name for them. Participants were offered a ten-dollar Amazon gift card as a thank you for participation in the study.

*Participant One.* Jennifer attended a community college for three years prior to attending her current university. She had senior standing at the time of the interview. Jennifer shared that she was born in Mexico, is the eldest of her siblings, and English is her second language. She reported that her college transfer process was a bit more difficult than some of her peers due to the language difficulty.

*Participant Two.* Salma had just graduated with her bachelor's degree at the time of the interview. She attended community college for four years before transferring and completing her undergraduate work at the university. Salma is also the oldest of three siblings and the first in her family to attend and graduate college. She feels she has paved the way toward higher education for her sister and brother.

*Participant Three.* Zoe had senior standing at the time of the interview and attended community college for two years before transferring. She mentioned participating in the Puente program at her community college. She described Puente as a bridge program primarily for low-income, first-generation, and underrepresented students to help prepare them to transfer from the community college to a four-year university.

*Participant Four.* Betty also had senior standing at the time of the interview. She completed three and a half years at her local community college before transferring to the four-year university. Betty is the youngest and the only one of her siblings to attend college. She attended a community college with a very low transfer rate. Participation in the Puente Project helped her in transferring from her local community college to the university.

### ***Procedures***

Students who met criteria were invited to participate in an in-person interview with the researcher. Before the interview began, the researcher went through the consent process with all participants, informing them that they could decline to answer any questions or stop their participation at any time. Possible risks and benefits associated with this study were discussed and referral resources were offered in case participants experienced uncomfortable emotions while or after sharing their experiences. Interviews averaged 30-45 minutes and were audio-recorded with the permission of each participant. At the end of each interview, participants were given the researcher's email address to forward to any other Latina/o community college transfer students that might be interested in participating in the study. Ten-dollar Amazon gift cards were emailed to students upon conclusion of the interview.

## *Instruments*

The researcher designed an in-depth, semi-structured interview protocol based on a review of the extant literature to obtain information about this phenomenon. Interviews consisted of seven open-ended questions about participants' perceptions of their community college(s) experience and transfer processes (see **Appendix A**).

## *Analysis Using Transcendental Phenomenology*

Qualitative research is often conducted when the researcher wants to empower individuals to share their stories, to hear participant voices, and to understand the context in which participants in a study address an issue (Creswell, 2007). The qualitative method of transcendental phenomenology entails the scientific study of a phenomenon as it appears to the participant and researcher. In transcendental phenomenology, the researcher sets aside as much as possible his/her own experiences and “focuses on the descriptions of the experiences of participants... by taking a fresh perspective toward the phenomenon under examination” (Creswell, 2007, p. 60). Specifically, the researcher identified significant participant statements and phrases related to the lived experience of transferring from a community college to a four-year university, as well as ways in which participants discussed overcoming academic challenges. The researcher formulated meanings through synthesizing significant statements into a composite textual and structural description of the essence of academic resilience (Moustakas, 1994). Once given meaning, significant statements were defined by the researcher and clustered into themes. The themes that emerged helped to highlight various aspects of the phenomenon of academic resilience among these particular Latina transfer students.

## Results

Five themes emerged from the interview data that were related to academic resilience: Developing Self-Efficacy, Having Mentor Support, Reaching Maturity, Aspiring to Be a Role Model, and Desiring to Pay It Forward. Definitions and descriptions of the themes as well as substantiating quotes from the four interviewees for each of the themes are presented in the following section.

### *Theme 1: Developing Self-Efficacy*

Developing self-efficacy was defined as the process of coming to believe that one can achieve their educational goals. All participants expressed the importance of believing in oneself or developing the positive belief of knowing they could reach their goals. For example, Jennifer shared, “I know I can do something good...I think I’m capable of some things. I can’t just stop and quit education, like I need to go as far as I can.” Jennifer went on to express her thoughts about accomplishing her objective to transfer:

“One of the things that, like, I feel, like, I have succeeded was because I did that, I was able to transfer...I’ve been able to keep up with the things I have to do in school...I just want to know that I did it. Like I did it, umm, because I feel like getting a bachelor’s degree will definitely get me closer to where I want to be and its gonna kinda like show me that I’m a step closer; that I was able to do this so I can definitely go farther or something.”

Successfully accomplishing transfer to the university reaffirmed her abilities and made Jennifer proud. Like Jennifer, Salma and Betty explained that they felt that they had no other option but to persist. For example, Salma stated, “Whenever I’m like, oh my God, whenever I felt like the most lost, I was like, no I have to do it, like I have to find a way ‘cuz I have to.” Similarly, Betty said,

“I’m so close to the end! I can’t stop.” All participants expressed acquiring the belief that they can accomplish their goals as well as the sense of being so close to the end that turning back or giving up would be devastating, not only for them, but for their families and mentors who helped them reach their goals of transferring.

## ***Theme 2: Having Mentor Support***

Having Mentor Support was defined as guidance and encouragement from individuals associated with the community college. All participants mentioned encouragement or guidance from either a counselor or faculty member. These mentors played an important role in the transfer process. For example, Salma reported, “There was one counselor that I met that, he was like the one person at City College that did care...he like slapped me around a little and he was like, ‘okay, you are going to take these classes, this class, this class and you’re going to be ready, to transfer.’” Jennifer shared a similar experience. She said, “It was a counselor that told me, like, you can do better than that. You can go to (west coast public university) if you want to. He’s the one who encouraged me to... I never had a counselor like that, just he really cared and he pushed me, he’s all, ‘you can do better’ and I needed that.”

Betty and Zoe discussed their participation in their community college PUENTE programs, a program that prepares students for transfer to a four-year-university by providing mentor-like support for academic achievement. Zoe said being in PUENTE allowed her to make connections with administrators and counselors, who helped her gain an administrative job on campus where she “got to work behind the scenes.” This job gave her easy access to administrators and counselors with knowledge to share about the transfer process. In addition, Betty explicitly said, “there was one professor that I had for three different classes and he was...he’s really nice and he would always just give advice on like



just go and find, find something, like you can do it, like don't let money be an issue.”

In the above descriptions, the fact that counselors and faculty realized these students had the potential to succeed fostered their resilience and motivated them to continue their educations. Having someone believe in their academic abilities convinced them they could be successful in transferring to a university. The support not only convinced them, but it also encouraged them to believe that they could do it. Thereafter, these mentors invested their time to guide these women in their transitions from community college to the university through moral support and sharing information about four-year institutions.

### ***Theme 3: Reaching Maturity***

Reaching Maturity was defined as the passing of time, or in other words, the “coming of age,” described by participants that allowed them to prepare to move to another city and attend the university. In addition, this theme incorporates personal growth or new experiences during college that participants felt they would not have gained had they not attended community college before attending a university. Jennifer summarized it best:

“When I went to college, community college, I was able to work so I was able to get that (sic) little work experiences that helped me to go into the university more mature because usually I think that other kids that go there from the start they’ve never had a job - they don’t have that kinda life experience.”

Managing a job during her community college years allowed Jennifer to become financially responsible and slowly learn what it means to become an adult. Similarly, Salma expressed “reaching

maturity” as proving to her parents that she could be independent on a financial level. She explained:

“I bought my car, like I had money that I saved up, like I guess I had to prove to them that I could be independent and, like, I could handle it so...I think they were like a lot more supportive of me, like, doing it and they understood that it was like, basically I had no option, like if you want me to get my... my degree like I have to go.”

Salma continued by saying that maturing helped her become confident and ready for the transition: “it kinda helped me feel more independent and more ready ‘cuz I feel like if I had come out of high [school]...I would’ve like maybe not felt as confident or felt as ready.” Each of these participants explained that reaching a new level of maturity prepared them for transfer. A few times throughout the interviews, they compared themselves to students who had enrolled at the university directly from high school. They felt they were more mature than their peers who started a four-year university after high school graduation because they had to learn how to manage school, work, and family responsibilities.

#### ***Theme 4: Aspiring to Be a Role Model***

Aspiring to Be a Role Model was defined as wanting to pave the way for other individuals, especially for the participants’ family and friends. Salma passionately expressed, “I guess like, the biggest motivation for me is always like, my family...I’m the oldest so I need to set that example.” Not only is there a sense of responsibility, but there is an emphasis in the motivation to set an example and show others that they too, can persist. Betty stated:

“I also don't want to disappoint anyone, so that's kinda...and I have my niece and nephew who are ten

and seven and they're going through a crappy situation. My mom is trying to get custody of them so (inaudible) I'm just trying to be a good example for them like showing them that no matter what you can do it."

For both Betty and Salma, family was a major motivator to achieve their goals. Salma expressed feeling that, as the oldest sibling, she carries the responsibility of being a role model. She is paving the path to higher education for her siblings. The aspiration to become a role model does not only stay in the immediate family, but also expands to extended family members as supported by Betty's claims. Salma, Jennifer, and Zoe each shared that as older siblings they wanted to be the ones to show younger siblings and family members that pursuing higher education is possible.

### ***Theme 5: Desiring to Pay it Forward***

In addition to the theme Aspiring to be a Role Model, Desiring to Pay it Forward also encompasses wanting to help others. The idea of paying it forward was defined as giving back to those who do not have the opportunity to pursue a college education because of finances or other responsibilities. It also can entail thanking family, friends and mentors for their support. All participants acknowledged that many do not have the same opportunity to pursue higher education that they have had. Moreover, they shared a deep desire to use their access to higher education as an opportunity to do good for others. For example, Betty acknowledged, "Now that I am here I can't waste it. There's like so many more people who would like just, like want to be here but they can't because of their life style, like, life choices or whatever."

She continued by speaking about a group of friends that did not transfer at the same time she did, but with whom she remained in contact. Betty helped guide them through the transfer process.

Since she had already transferred, she was able to provide information she wished she had known. For Salma, the best way to pay it forward is to support her parents financially. She stated, “Like, that’s what I wanna do in the future, like, hopefully be able to support them that way.” Zoe also articulated the reality for many community college students when she made the following observation and desire of paying it forward:

“Eventually I want to take that all back to where I came from, which is my community college, and teach there [but] I’ve also seen a lot of transfer students kinda either have to switch majors or to kinda drop out because...it was too much for them and so kinda seeing that I was like, I do not want that to be me and I am going to do this for the people who can’t do it kinda thing...like, I’m doing this for the people who can’t, you know or don’t have the opportunity to.”

## **Discussion**

This study makes a significant contribution to the literature in that it sheds further light on the lived experiences of Latina community college transfer students. Overall, the findings of this study are consistent in many ways with previous research findings. For example, Developing Self-Efficacy and Desiring to Pay It Forward are both important themes that are addressed, whether directly or indirectly, in the extant literature. Researchers have found that self-efficacy, or believing one can achieve something, is more important than thinking that one is intelligent (Cavazos et al., 2010; Zell, 2010). Similarly, all participants felt that perseverance and self-belief were the attributes that allowed them to become successful in transferring from community college to the four-year university. The same theme of Pay It Forward was described in another study (Easley et al., 2012) as the feeling of duty to help others with similar stories as a source of motivation to transfer and

attain a bachelor's degree. The desire to repay and pay forward consisted of participants' goals of financially supporting their families or taking care of them. Such findings match the goals of the participants in the current study.

Aspiring to Be a Role Model is somewhat related to Desiring to Pay It Forward. For instance, for Betty, as a first-generation college student, setting the example for her friends at her previous institution, while offering her experience to guide them in the transfer process was a form of giving back and helping out. Betty's transfer experience allowed her to answer her friends' questions about transferring and make suggestions about the process. She felt this helped contribute to her academic resilience because she was paving a way for her friends to transition from community college to the university more smoothly. Transfer students can become more confident that they can accomplish transferring if a friend or someone they know who is similar to them has already done so.

The two themes of Reaching Maturity and Having Mentor Support are also consistent with the literature. The idea of reaching maturity reflected participants' feeling that their community college enrollment assisted in their development and allowed for a maturing of personal, academic, and career goals. Zell's study (2010) supports this finding, where the researcher found that most community college participants believed that their time at their community college assisted them in maturing in personal and professional goals, as well as preparing them for the next steps. The importance of mentor support is evident to the participants in this study as it was mentioned by all four women and is supported by previous studies showing that mentors have a positive impact on community college students' GPA (Tovar, 2015). Students' perceptions of having support, or mentor relationships, are strongly related to persistence in school (Bordes-Edgar, Arredondo, Kurpius, & Rund, 2011).

## **Limitations and Future Research Directions**

Although this study provides valuable preliminary information about the phenomena of Latino/a transfer students overcoming adversities and engaging in academic resilience in the university setting, it is not without limitations. Primarily, while recruitment efforts were aimed towards obtaining the voices of both male and female Latina/o community college transfer students, only female participants showed interest in participating. A mix of genders could have provided more variety and range of responses. Past research has indicated that Latinas outnumber Latinos on college campuses. Fry (2002) reported that in the overall population of 1.3 Latina/o college students in the United States, 57 percent are Latinas, as compared to 43percent Latinos. This may provide a partial explanation for the all-female participation in the current study.

Next steps and future directions in this area of research include continuing to recruit participants in order to obtain a larger range of experiences of Latina/o transfer students. Extending this research to a longitudinal study could also be informative. This might encompass interviewing participants at different stages of their academic careers, for example, while the student is enrolled at a community college, during the transfer process, after transfer, and/or after graduation. Additionally, it seems it would be informative to explore the perceptions of family members about students' resilience, including asking such questions as: "what do parents and siblings feel has helped their child or family member be academically resilient?" It is important to explore these questions to uncover effective ways of helping Latinas overcome adversity in the personal and academic lives.

## **Implications**

The findings of this study may be helpful to counselors and instructors at both HSIs and non-HSIs working with Latina/o

community college students who transfer to their institutions. For example, knowing of an individual's desire to be a role model and to pay it forward may help the counselor or instructor to understand more fully what motivates Latina/o community college students to continue their higher educational goals. This in turn may help in guiding them to transfer to a four-year university.

Having mentor support also plays a critical role in academic success; therefore, mentor figures should be cognizant of the impact of their roles on the student. This may entail making themselves as available as possible for encouraging and advising (whether formal or informal) these students. Understanding the unique positions of many of these students with regard to their family and student roles is critical. With this realization, mentors may be able to adapt their mentoring styles to take into consideration specific needs.

Learning about the experiences of other students who transferred from a community college to a four-year university is also valuable to students preparing to transfer. Therefore, community colleges should consider partnering Latina/o students preparing to transfer with successful Latina/o transfer students for motivation and to help develop the belief that they too can overcome obstacles in the educational setting. Similarly, community colleges can improve formal bridge programs, such as the PUENTE program in which two of the four participants in this study participated. Mentors may also want to help students explore other support program possibilities once they transfer, such as the McNair Scholars Program and the Educational Opportunities Program, which are federally funded programs that support students from low-income, first-generation, and underrepresented backgrounds. It is imperative that more outreach programs be implemented on both community college and four-year university campuses, as many students are unaware of such opportunities. This may be particularly important in that many Latina/o students

are enrolled part-time, thus spending less time on campus and perhaps not knowing how to seek this information on their own.

It is also crucial for HSIs to employ a sufficient amount of supportive counselors and academic advisors as suggested by Tovar (2015). Participants in the current study expressed that frequently it could take as long as a month to see a counselor or advisor. This proved to be a problem for them since more immediate help with course planning and academic advising was necessary to keep them on track for either graduation or transfer within a certain period.

Finally, mentors should realize the importance of the time in community college for transitioning to later education. Participants discussed the fact that balancing the responsibilities at home and community college, while difficult, was helpful to them in their maturation and readiness for a four-year college/university. Framing this time as an opportunity for growth and attaining new skills may help community college students appreciate their experience and time in community college as good preparation for later academic endeavors.

## **Conclusion**

Latina/o community college students face barriers to transfer and degree attainment that differ from those of students from other racial backgrounds or four-year universities. This study has highlighted some of the important aspects of life and transition for Latina transfer students. In general, positive factors that counteract systemic negative influences and contribute to academic resilience in Latina community college transfer students are necessary and achievable. Counselors, faculty and resources at community college, such as college and career centers, must take a more personal, one-on-one approach when working with Latina students who intend to earn a bachelor's degree in order to assist these students more effectively and increase the transfer rate and



their degree attainment. These findings should be considered when working with Latina/o community college students to help them be academically resilient.

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## **Appendix A**

### **Interview Protocol Semi Structured Interview Questions**

1. Tell me about your educational experience prior to attending this university.
  - a) Tell me about the school(s) you attended. Why community college?
  - b) Please share your opinions on teachers/professors in general (e.g. their availability, helpfulness).
  - c) Tell me more about the duration of your community college enrollment.
  - d) Can you share about the time (quarter/semester) system at your previous institution(s)?
    - How do you feel about the previous system? How do you feel about the current system?
2. What are your attitudes towards your community college experience?
  - a) Discuss work experience if any.
3. How do you feel about the helpfulness of transfer resources at your previous institution/helpfulness of previous institution in preparing you for transfer?
4. Please discuss any adversities you may have experienced during your time at your previous institution(s).
  - a) How were you able to overcome these challenges?
5. Tell me about what has contributed to your academic success or not.
6. What were your motivations for transferring?
  - a) What are your motivations for graduating?
7. How has your experience as a community college student influenced your academic/career goals?

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Finalmente, gracias a toda mi familia y amistades por sus consejos y apoyo. Hay belleza en la lucha, sigamos luchando y logrando nuestras metas.

# Why Are Polar Bears Still Being Hunted?

## Sylvia Garcia

Mentor: Professor Tommy Dickey  
Geography Department

### Abstract

*An often overlooked factor that affects Polar Bear populations is overhunting. While climate change and environmental pollutants are expected to adversely affect Polar Bear populations, these factors are both relatively long term effects. On the other hand, overhunting is a more imminent, short term effect that can, in principle, be alleviated within a few years. The Canadian government, in particular, currently does not see a need for hunting reform and there are highly visible non-profit organizations that essentially ignore the problem of overhunting, also euphemistically called overharvesting, while pushing global climate change as virtually the only significant threat. This report argues that the United States and other arctic nations need to re-evaluate their hunting policies and enforcement. An overarching goal of the present research is to demonstrate the need for a comprehensive plan of action that could be more effective in reducing current threats to Polar Bear populations. I examine current models used to estimate Polar Bear population dynamics and provide background information on why Polar Bear populations are on the decline. My hypothesis is that overharvesting is the major threat. I highlight overharvesting as the key imminent, short-term threat and emphasize the need for legislative reform and law enforcement governing hunting in order to ensure the continued existence of Polar Bear populations into the future.*



## Introduction

Not many people have actually seen a Polar Bear other than on television, in a zoo or perhaps in a National Geographic magazine. For many, their first time may have been in the famous Coca-Cola advertisement which

featured a cute Polar Bear family drinking Cokes



Figure 1 “Coca-Cola”. Coca-Cola advertisement featuring Polar Bears. Adapted from the Coca-Cola website.



Figure 2 A political cartoon titled “Drawing the line in Mississippi” by Clifford Berryman posted in the Washington Post adapted from “The History of the

significantly by “sparing the life of a black bear cub,” a wild animal previously viewed as a scary and dangerous creature that

against the Arctic night sky. But where did the jump from Polar Bears in the wild to a cute animation come from? Bears in general have been anthropomorphized, due, in part, to the creation of the cuddly Teddy Bear.<sup>1</sup> The Teddy Bear was an homage to Theodore Roosevelt who changed the bear’s image

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<sup>1</sup> Ted Talks, “Jon Mooallem: How the Teddy Bear Taught Us Compassion,” published June XX, 2014, [[https://www.ted.com/talks/jon\\_mooallem\\_the\\_strange\\_story\\_of\\_the\\_teddy\\_bear\\_and\\_what\\_it\\_reveals\\_about\\_our\\_relationship\\_to\\_animals?language=en](https://www.ted.com/talks/jon_mooallem_the_strange_story_of_the_teddy_bear_and_what_it_reveals_about_our_relationship_to_animals?language=en)], accessed July 2015.

needed to be shot on sight.<sup>2</sup> The Teddy Bear depiction of the bear altered the American perception of bears forever and, in turn, would play a role in the 21<sup>st</sup> century when the Polar Bear became the symbol of global warming.



**Figure 3 A Poignant Moment.** This is a famous photography by renowned photographer Ira Meyer depicting a Polar Bear with her cub on thin ice Adapted from Ira Meyer personal website, [[http://www.irameyer.com/galleries/the\\_arctic/detail\\_h.asp?product\\_id=arctic2](http://www.irameyer.com/galleries/the_arctic/detail_h.asp?product_id=arctic2)]

An important question to pose is “Why are Polar Bears positioned as the face of global warming rather than possibly Penguins?” Part of the reason is that the Arctic region is melting at an alarming rate, thought to be twice the earth’s overall warming rate. In the annual magazine for Polar Bear International (Fall 2014), *Tundra Times*, the nonprofit organization had this to say about Polar Bears, “Striding across the top of the world, the polar bear is an iconic symbol of a threatened Arctic.” The threatened sea ice is further described in an article from *Discover Magazine* entitled,”

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<sup>2</sup> Ted Talks, “Jon Mooallem: How the Teddy Bear Taught Us Compassion,” published June XX, 2014, [[https://www.ted.com/talks/jon\\_mooallem\\_the\\_strange\\_story\\_of\\_the\\_teddy\\_bear\\_and\\_what\\_it\\_reveals\\_about\\_our\\_relationship\\_to\\_animals?language=en](https://www.ted.com/talks/jon_mooallem_the_strange_story_of_the_teddy_bear_and_what_it_reveals_about_our_relationship_to_animals?language=en)], accessed July 2015.

New Record Low for Arctic Sea Ice, plus more Sobering News about Western U.S. Snowpack.” Tom Yulsman wrote “The extent of Arctic sea ice in March (2015) hit a record low for the month in the satellite era (since 1978), according to the latest update from the National Snow and Ice Data Center.”<sup>3</sup> However, while some parts of Antarctica are melting, there are other parts that are actually accumulating more ice.<sup>4</sup> In addition, the famous Ira Meyer photograph of a lone Polar Bear and her cub on a small piece of sea ice helped establish the Polar Bear as the symbol of global warming. The Meyer picture was taken in 2007 in Svalbard, a Norwegian archipelago in the Arctic Ocean, and was used as the cover of the Turkish version of *National Geographic's* Climate Change special edition. In 2011, *National Geographic* also used a similar Polar Bear image on their cover entitled *On Thin Ice*. These photos served to capture the shrinking Arctic polar ice, to warn of impending environmental disaster, and to call attention to the damage humans have caused to the Arctic region. Several photos of imperiled Polar Bears have subsequently appeared in many scientific journals and magazines. In particular, one image of Polar Bears possibly drowning in the middle of the Arctic Ocean

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<sup>3</sup> Tom Yulsman, “New Record Low for Arctic Sea Ice, plus more Sobering News About Western U.S. Snowpack,” *Science for the Curious Discover* April 9, 2014, [<http://www.blogs.discovermagazine.com/imageo/2015/04/09/new-record-low-for-arctic-sea-ice/#.Va80NCjK-oU>], accessed July 2015.

<sup>4</sup> Karl Mathiesen, “Why is Antarctic sea ice at record levels despite global warming?,” *The Guardian*, October 9, 2014, [<http://www.theguardian.com/environment/2014/oct/09/why-is-antarctic-sea-ice-at-record-levels-despite-global-warming>], accessed July 2015.

due to sea ice loss has left a lasting impression on many and is still used today to represent global warming in the Arctic region.<sup>5</sup>

## **The Problems and Controversies around Polar Bear Conservation**

The first major attempt at Polar Bear conservation came under the International Agreement for the Conservation of Polar Bears and Their Habitat, which was signed in 1973.<sup>6</sup> The agreement was an effort to manage hunting practices. At the outset, it is important to emphasize that historically hunting has undeniably been the overwhelming cause of Polar Bear population declination. For historical context, fig. 4 is a diagram that shows how many Polar Bears were reported as killed annually from 1955 to 1999. Before the 1973 International treaty was signed, the Polar Bear harvest decreased precipitously to about 12,000<sup>7</sup> and Polar Bears were in danger of becoming extinct even though they were able to live in relatively favorable ice conditions. While the U.S. has decreased its harvesting quotas, Canada's quotas increase, as seen in **Figure 4**.

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<sup>5</sup> WUWT, "The polar bear poster that launched a thousand quips," <http://wattsupwiththat.com/2011/08/08/the-polar-bear-poster-that-launched-a-thousand-quip>, accessed April 2016.

<sup>6</sup> Pal Prestrud and Ian Stirling, "The International Polar Bear Agreement and the Current Status of Polar Bear Conservation," *Aquatic Mammals* (1994), [[http://www.aquaticmammalsjournal.org/share/AquaticMammalsIssueArchives/1994/AquaticMammals\\_20-3/20-03\\_Prestrud.pdf](http://www.aquaticmammalsjournal.org/share/AquaticMammalsIssueArchives/1994/AquaticMammals_20-3/20-03_Prestrud.pdf)], accessed July 2015.

<sup>7</sup> U.S. Fish and Wildlife Service, "Remarks by Secretary Kempthorne Press Conference on Polar Bear Listing", <http://www.fws.gov/home/feature/2008/polarbear012308/pdf/press-conference-remarks.pdf>, accessed May 2008.

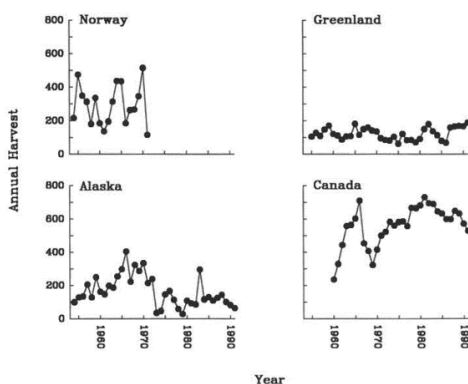


Figure 4 Record Harvest of Polar Bears in Norway, Greenland, Alaska and Canada from 1955 to 1991.

In a paper by Ian Stirling and Paul Prestrud entitled *The International Polar Bear Agreement and the Current Status of Polar Bear Conservation* (2003), the authors state that most Polar Bears are hunted by Inuits, which may have been true on the onset when the international agreement was initially set in motion.<sup>8</sup> The intent of the agreement was to give “additional protection”<sup>9</sup> to Polar Bears; however this “additional protection” is no longer effective in safeguarding Polar Bears or even in protecting the

<sup>8</sup> Pal Prestrud and Ian Stirling, “The International Polar Bear Agreement and the Current Status of Polar Bear Conservation,” *Aquatic Mammals* (1994), [http://www.aquaticmammalsjournal.org/share/AquaticMammalsIssueArchives/1994/AquaticMammals\_20-3/20-03\_Prestrud.pdf], accessed July 2015.

<sup>9</sup> ‘Agreement on the Conservation of Polar Bears’, *Polar Bear Specialist Group*, 2013, <http://pbsg.npolar.no/en/agreements/agreement1973.html>, (accessed 20 January 2016).

traditions of the Inuit people who believe Polar Bears are part of their “national heritage.” It is important to note that arguments supporting native hunting of Polar Bears on cultural and religious grounds (e.g., animism) became questionable, if not invalid, when aboriginal<sup>10</sup> people in Canada were allowed to sell their Polar Bear hunting quotas through an agreement with the Canadian government to non-aboriginals and to lead hunts by sportsmen for personal profit. This comes at a time when the newly elected Prime Minister of Canada, Justin Trudeau, wants to build a new relationship with the indigenous people of Canada and to be sensitive to their needs.<sup>11</sup>

Today in Canada, Inuits act as guides and lead legal Polar Bear hunts where tourists use high powered rifles and snow mobiles to hunt down Polar Bears. The use of high-powered weapons and modern hunting platforms are in fact abuses and violations of the International act.

## **Methods and Models**

In this section, I discuss some of the methods that I have used to compare relevant data on Polar Bear populations to analyze why population numbers vary so drastically. I also wanted to analyze which models account for negative human interactions with Polar Bears; such interactions include hunting and even applying radio collars for scientific research. I start by looking at different models used for tracking/measuring Polar Bear populations and provide some graphs used to show Polar Bear

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<sup>10</sup> Aboriginal peoples in Canada, or Aboriginal Canadians, are the indigenous peoples within the boundaries of present-day Canada.

<sup>11</sup> Connie Walker, “Justin Trudeau signals new approach to relationship with indigenous people,” CBC News, November 4, 2015, [<http://www.cbc.ca/news/aboriginal/justin-trudeau-signals-new-approach-to-relationship-with-indigenous-people-1.3304234>], accessed April 2015.

populations and compare them with models that might do a better job of determining Polar Bear populations.

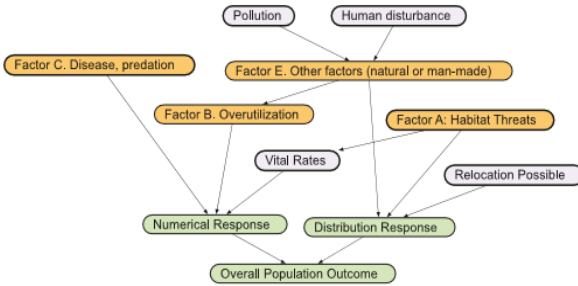
There are three current models that I will discuss. The first is the Bayesian Model used by Dr. Steven C. Amstrup. The next is the Demographic Data Model used by the United States Geological Service and the last model is an Entropy model that could, in principle, be used to give a more accurate account of population density as Polar Bears move from sea ice loss areas to permanent sea ice areas.

### ***Bayesian Modeling used by Dr. Steven C. Amstrup***

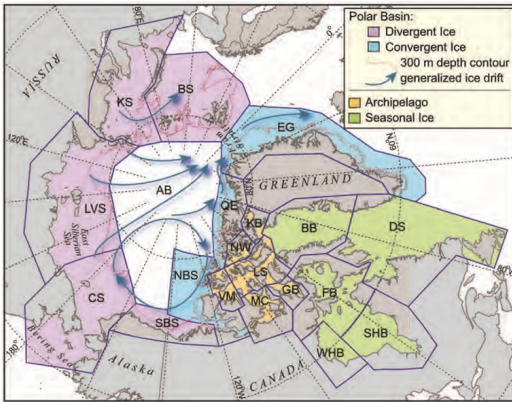
Dr. Steven C. Amstrup is a renowned scientist whose research focuses on the Arctic region with special attention to Polar Bear populations. In his 2008 article, *A Bayesian Network Modeling Approach to Forecasting the 21<sup>st</sup> Century Worldwide Status of Polar Bears*, co-authored with Bruce G Mascot and David C. Douglas, Dr. Amstrup says that the intent of the paper is “to inform the U.S. Fish and Wildlife Service decision, whether or not to list polar bears as threatened under the Endangered Species Act (ESA)...” The model is based on the Bayesian network approach<sup>12</sup> which is illustrated below:

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<sup>12</sup> A Bayesian model is a mathematical framework (embodying assumptions and judgments) for quantifying uncertainty about unknown quantities by relating them to known quantities.



**Figure 5** Basic influence diagram for the Bayesian network polar bear population stressor model showing the listing factor categories (orange) used by U.S. Fish and Wildlife Service.



**Figure 6** Arctic Ecoregion Map. This map shows the Arctic broken up in ecoregions. Adapted from Resilience and Risk—A Demographic Model to Inform Conservation Planning for Polar Bears.

According to Amstrup et al., the Bayesian network **Figure 5**<sup>13</sup> model takes into account the relationships of sea ice change as well as other potential stressors to the decline of Polar Bear populations.

<sup>13</sup> Steven C. Amstrup, Bruce G. Marcot, and David C. Douglas, "A Bayesian network modeling approach to forecasting the 21st century worldwide status of polar bears," *Arctic sea ice decline: observations, projections, mechanisms, and implications* (2008): 213-268.



This model is described as a way to "forecast future population status of polar bear in each four distance ecoregions."<sup>14</sup> These ecoregions, shown on the map in **Figure 6**, are the following: seasonal ice ecoregions (SIE), archipelago ecoregion (AE), polar basin divergent ecoregion (PBDE), and polar basin convergent region (PBCE). Amstrup believes that "localized human activities appear to have little qualitative affect on the future of Polar Bears in the PBDE and SIE region. He emphasizes this in his conclusion that human activity will have little affect on 'mid century loss.'" He concludes that more extensive sea ice loss would have to occur than what models predict in order to have a negative impact on Polar Bear population numbers. More research on the Bayesian network modeling needs to be done to conclude if this is the best modeling system to predict Polar Bear populations. While this article focuses on future loss, it does not give the baseline that was used to predict such losses.<sup>15</sup>

### ***Demographic Model Used by Unites States Geological Service***

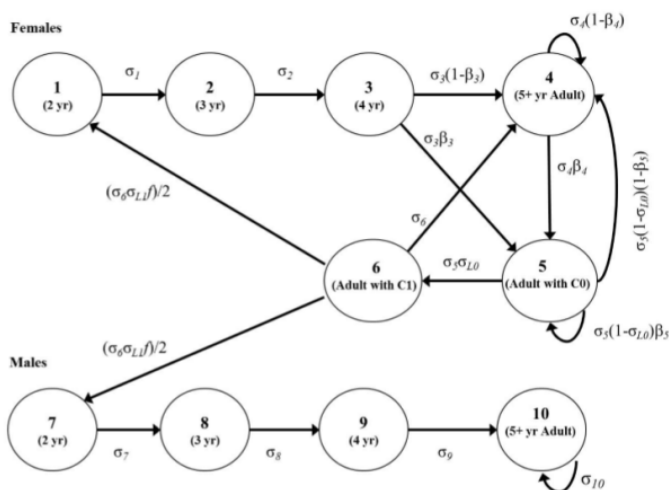
The Bayesian Model has been countered by the Unites States Geological Service, which conducts research in Alaska. According to the introduction to their report, *Resilience and Risk, A Demographic Model to Inform Conservation Planning for Polar Bears*, by Eric V. Regehr, Ryan R. Wilson, Karyn D. Rode, and Michael C. Runge, unlike the Bayesian model used by Amstrup,

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<sup>14</sup>Steven C. Armstrup, Bruce G. Marcot, and David C. Douglas, "A Bayesian network modeling approach to forecasting the 21st century worldwide status of polar bears," *Arctic sea ice decline: observations, projections, mechanisms, and implications* (2008): 213-268.

<sup>15</sup> Steven C. Armstrup, Bruce G. Marcot, and David C. Douglas, "A Bayesian network modeling approach to forecasting the 21st century worldwide status of polar bears," *Arctic sea ice decline: observations, projections, mechanisms, and implications* (2008): 213-268.

the demographic model used by the USGS does account for the ‘effects of human caused removals’ by using a Polar Bear life cycle graph. The model includes the following factors and data: density dependence<sup>16</sup>, density-independent limitation<sup>17</sup>, and sex- and age-specific harvest vulnerabilities. (See **Figure 7**)



**Figure 7 Polar Bear Life Cycle Graph.** This graph represents the life cycle of Polar Bears with stages 1-6 representing females and stages 7-10 representing males. The graph shows that from one litter from a pair of Polar Bears that only one cub will survival until the spring. Adapted from “Resilience and Risk- A Demographic Model to Inform Conservation Planning for Polar Bears”

<sup>16</sup> The density of a population is simply how many organisms are living in a given area. Density-dependent factors are factors where the effects on the size or growth of a population vary with the density of the population itself.

<sup>17</sup> Any factor limiting the size of a population whose effect is not dependent on the number of individuals in the population. An example of such a factor is an earthquake, which will kill all members of the population regardless of whether the population is small or large.

This model also suggests that sea ice loss is detrimental to Polar Bear populations.<sup>18</sup> Currently there is an argument in the scientific community as to which models are better at predicting future Polar Bear populations. The outcome of this debate is significant as it may influence whether Polar Bears, currently listed on the less urgent Threatened Species List, will be placed on the Endangered Species List. If they are put on the latter list, then this would halt Polar Bear sport hunting in Canada. The Polar Bear Life Cycle Graph will lead to the conclusion that Polar Bears should be placed on the Endangered Species List versus just being on the threatened list.

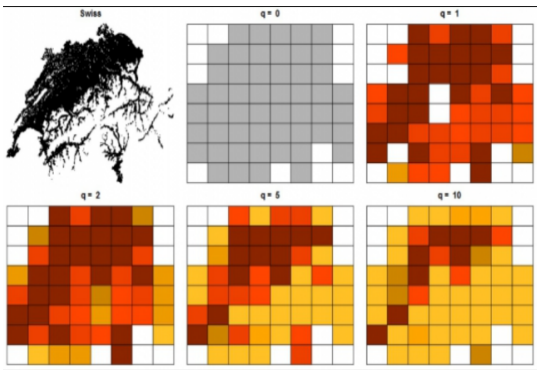
### *Entropy Modeling*

It would be ideal to find entropy models of Polar Bear populations that would account for Polar Bear population densities by accounting for habitat that is lost to Polar Bears. As Polar Bears move to colder ground, the lost habitat must be accounted for. Below is a figure based on what Entropy modeling would look like and next to it, in **Figures 8 and 9**, histogram examples. These do not correlate with Polar Bear populations, but are merely visualizations of entropy modeling and histogram. If Polar Bears no longer occupy an area due to sea loss, then that square, if it were to represent a square mile, would get a zero in its histogram. The zeros would then average out the areas where Polar Bears would then have to congregate which would affect the density population in that square mile. I observe that although environmental stressors might be used in the Bayesian model, they

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<sup>18</sup> Eric V. Regehr et al, "Resilience and Risk—A Demographic Model to Inform Conservation Planning for Polar Bears," US Geological Survey, 2015  
[<http://pubs.usgs.gov/of/2015/1029/pdf/ofr2015-1029.pdf>], accessed April 2015.

are not necessarily represented in a way that would account for habitat loss relating to my central hypothesis that Polar Bear population numbers are inflated. More Polar Bears in a region does not equate to an increase Polar Bear population but rather to a high clustering of Bears in that specific region. This is important because legal havesting is in direct correlation with Polar Bear population. A decrease in Polar Bear population means a decrease in Polar Bear harvesting quotas.



**Figure 8 Example of the box weighting procedure by means of the box counting method.** *This is an example of how this could be used for areas where Polar Bears no longer live and hunt due to changing ice conditions.* Adapted from <https://cybergeog.revues.org/26829>

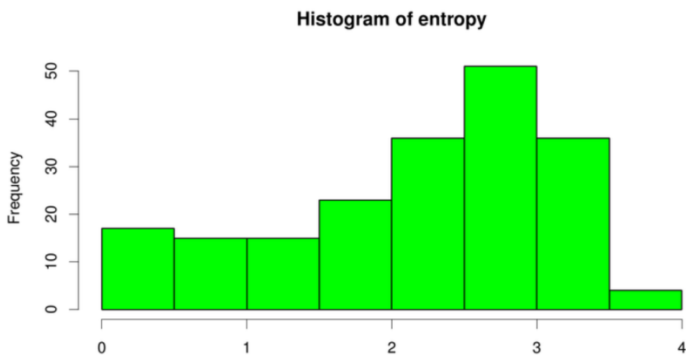


Figure 9 Example of histogram of entropy bar chart. Adapted from [http://2012.org/Team:TU\\_Darmstadt/Modeling\\_IT](http://2012.org/Team:TU_Darmstadt/Modeling_IT)

## Discussion

Since the Arctic ice coverage is generally shrinking, it is suggested that the Polar Bears may shift their location toward Canadian regions.<sup>19</sup> Any shifts of populations into Canadian territories could place Polar Bears in increasing jeopardy because Canada is the only country that still allows the legal hunting of them solely for sport and international commercial trade.<sup>20</sup> Native tribes are permitted to hunt Polar Bears under the International Agreement for the Conservation of Polar Bears and Their Habitat

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<sup>19</sup> Ian Stirling, *Polar Bears: The Natural History of a Threatened Species* (Canada: Fitzhenry & Whiteside, 2011), p. 25.

<sup>20</sup> Elly Pepper, Zak Smith, and Andrew Wetzler, "Polar Bears on the Precipice Commercial International Trade of Polar Bears is Affecting Their Chances of Survival," [nrdc.org](http://www.nrdc.org), February 26, 2013, [<http://www.nrdc.org/wildlife/cites/polar-bear/> ], accessed July 2015.

signed in 1973.<sup>21</sup> However in Canada, demand for Polar Bear fur (and trophies) has tripled and so has the price of their fur which leads to more Polar Bears being hunted and killed. It is difficult to estimate stable population numbers of Polar Bears but here are some numbers to ponder. A National Resource Defense Council article entitled *Polar Bears on the Precipice Commercial International Trade of Polar Bears is Affecting Their Chance of Survival*, states “15,000 of the world’s estimated polar bear population of 20,000 to 25,000 are managed wholly or jointly by Canada.” This means more than three quarters of the animals are not protected from legal hunting for the sole purpose of trade. Six hundred Polar Bears are killed each year in Canada.<sup>22</sup> Some estimate that 600-800 Polar Bears are killed legally each year in U.S, Canada, and Greenland.<sup>23</sup> However, that number is likely an underestimate. This number sometimes includes legal self-defense kills. The number of illegal and poaching kills is virtually unknown, but likely large in number and so therefore, not even included in reports and papers. Scientists from Canada and the United States found that, “Of the 80 cubs observed in in the Beaufort Sea in Canada from 2004 to 2007, only 2 cubs are known to have survived.”<sup>24</sup> These numbers improved in the following

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<sup>21</sup> Inuit Tapirit Kantami, “Inuit and Polar Bears,”

<https://www.itk.ca/about-itk/dept-environment-and-wildlife/polar-bears/inuit-and-polar-bears>, accessed July 215.

<sup>22</sup> Elly Pepper, Zak Smith, and Andrew Wetzler, “Polar Bears on the Precipice Commercial International Trade of Polar Bears is Affecting Their Chances of Survival,” Natural Resource Defense Council, February, 26, 2013,

[<http://www.nrdc.org/wildlife/cites/polar-bear/> ], July 2015.

<sup>23</sup> Polar Bear International, “Polar Bear Harvest,”

<http://www.polarbearsinternational.org/status-and-threats/overharvesting>, accessed April 2016.

<sup>24</sup> Jeffrey Bromaghin, et al., “Polar bear population dynamics in the southern Beaufort Sea during a period of sea ice decline,” Ecology Society of America, April, 1, 2015

years and, according to scientists, had stabilized to 900 Polar Bears in the area in 2010, although the scientists do not know why they presumably recovered. A replenishment of only two cubs is clearly not sufficient to sustain a population. Thus, the Canadian government developed an action plan to reduce hunting quotas in the area which allowed Polar Bears in that region to recover but scientists are not necessarily correlating this with recovery of the Polar Bear population in that area during that time period.

Trophy hunting became a worldwide concern with news of the killing of Cecil, a well-known lion in the Hwange Game Reserve, in Zimbabwe, Africa. Cecil was lured out of his protective habitat by baiting with meat and then killed by an American sports hunter who proudly displayed the dead Cecil as his trophy on the internet. The outcry of support for the lion comes at a time when big game hunting is very profitable to those organizing the hunts; this is especially true in Canada in regard to Polar Bears.

Canadian Inuits often legally sell off their quotas to non-natives (largely sport hunters from around the world) and thus the hunting of Polar Bears is no longer exclusively for traditional purposes (and following animism beliefs), but rather for commerce. The International Agreement for the Conservation of Polar Bears and Their Habitat was meant to end the commerce in Polar Bear skin and parts and only allow hunting for traditional purposes of the indigenous people. When profit became the main motive to continue Polar Bear hunting in Canada, it became more difficult to manage Polar Bear conservation and ultimately preservation. Canada manages its Polar Bear hunting with agreements with the Inuits. It is in these agreement sthat aboriginals can sell their quotas to non-aboriginals and is outside of the international agreement.

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[[http://www.usgs.gov/newsroom/article.asp?ID=4055 -.Vc2NjjK-oW](http://www.usgs.gov/newsroom/article.asp?ID=4055-.Vc2NjjK-oW)], accessed July 2015.

It is interesting to note that Morten Jorgensen, an opponent of overharvesting and author of *Polar Bears on the Edge*, felt the need to explain in his book that he is not a racist.<sup>25</sup> Many cultures that want to protect their culture and traditions often cite racism when outsiders question them about the abuses of animals in cultural traditions. Canada has chosen not to challenge those policies protecting cultural traditions apparently because of the protests from the Inuit people and the backlash arising from bad public relations. It does not appear that Canada plans to change its agreement to sell their quotas anytime soon. Any current and future agreements are based on the number of allotted quotas for each Inuit community. Despite protests from many in favor of preserving Polar Bears and shielding them from sport hunting, the Canadian government has thus far refused to modify or reform its sport hunting policies. It remains to be seen if the newly elected liberal Canadian leadership will address these important issues as it attempts to balance the demands of the native population and the conservation/preservation of Polar Bears for the future.

The U.S. faces similar issues. While those of us living in the lower 48 states create a carbon footprint that affects wildlife in other regions, some argue that it is hypocritical for us to tell natives peoples whose carbon footprints are far smaller to stop their cultural practices and in essence to pay for our mistakes. Currently there are websites dedicated to defending the rights of the Inuits to continue to hunt Polar Bears as well those taking opposing positions.

In *Noodling for Flatheads*, Burkhard Bilger examines cultural traditions and customs in the United States. He outlines some of the traditions that have taken place in the lower 48 such as coon hunting and cockfighting. In addition to Bilger's book, early

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<sup>25</sup> Morten Jorgensen, *Polar Bears on the Edge*, Spitsbergen: Svalbard.com, 2015.



Victorian literature, such as “Battles of the Wild Beasts,” mention Bear Gardens, where people would watch a bear chained to a tree being attacked by dogs (i.e., bear baiting) as a form of entertainment. After researching the driving forces which keep these traditions alive, it is clear that traditions often clash with conservation efforts. This leads to politics playing the key role in management of Polar Bears. Inuit representatives are trying to convince the United States that putting Polar Bears on Appendix 1,<sup>26</sup> the endangered species list, would be “detrimental to hunting activities” according to Adamie Delisle-Alaku, a spokesperson for the Inuits.<sup>27</sup> The move would mostly impact Canada’s indigenous population but also anyone who profits from international trade of Polar Bear skins, trophies, and body parts.

It is difficult to avoid passing judgment and say that using animals for cultural traditions is outdated and just plain wrong. However, by learning about the people themselves and their traditions, scholars can gain a better understanding of a society’s values and cultural traditions. I am not convinced that such traditions should trump the welfare and wellbeing of animals, especially those that are so unique, endangered, and ecologically important as the Polar Bear. Nonetheless, it is important to learn about Native traditions in order to devise better solutions for the management of Polar Bears since hunting these animals is part of the Inuit tradition. There have been numerous cases such as the

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<sup>26</sup> Jeffrey Bromaghin, et al., “Polar bear population dynamics in the southern Beaufort Sea during a period of sea ice decline,” Ecology Society of America, April, 1, 2015 [<http://www.usgs.gov/newsroom/article.asp?ID=4055-.Vc2NjjK-oW>], accessed July 2015.

<sup>27</sup> Sarah Rogers, “Canadas polar bear management is sound, Inuit tell US government,” Nunatsiaq Online, February 10, 2016, [[http://www.nunatsiaqonline.ca/stories/article/65674canadas\\_polar\\_bear\\_management\\_is\\_sound\\_inuit\\_groups\\_to\\_u.s.\\_government/](http://www.nunatsiaqonline.ca/stories/article/65674canadas_polar_bear_management_is_sound_inuit_groups_to_u.s._government/)], accessed April 2015.

white rhino where animals have been hunted to extinction. We need to strike a balance between cultural tradition and preservation. Part of this lies in coming to grips with the question of the centrality of hunting Polar Bears to Inuit culture.

Advocating for animals is important, but the Inuit people feel that advocating for their tradition is important as well. They currently have support from the Canadian government which feels that it must compensate the Inuits for prior mistreatment by allowing them to continue to hunt Polar Bears and even allow them to guide sportsmen to kill the Bears in the name of economic stability for Inuit villages. The Inuits have launched a website and established, the ITK Department of Environment and Wildlife to promote their point of view. Indigenous Inuit advocacy groups in Canada provide a way for people to voice their own perspective on harvesting Polar Bear fur and explain how they are economically dependent on Polar Bears. The website does discuss the 1973 International Agreement on the Conservation of Polar Bears. In the agreement itself, there are quotas the government set to which the Inuit People then agreed to adhere. This information is important because it gives the Inuit perspective about staying within the allotted quotas, agreed upon with community leaders.<sup>28</sup> When discussing selling their quotas this is what the articles says, “Quotas are allocated exclusively to Inuit, although communities may choose to use part of a quota to offer guided hunts to non-Aboriginal hunters. Traditional hunting methods must be used, and any parts of the bear not used by the non-Aboriginal hunters are used by the community.”<sup>29</sup> While the article insist that this is not

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<sup>28</sup> Department of Environment and Wildlife,  
<https://www.itk.ca/about-itk/dept-environment-and-wildlife>,  
accessed April 2016.

<sup>29</sup> Department of Environment and Wildlife,  
<https://www.itk.ca/about-itk/dept-environment-and-wildlife>,  
accessed April 2016.

trade driven, that is not completely true since there has been an increase demand for Polar Bear skins.

Hunting Polar Bears as part of wildlife management is controversial. It is important to first understand how the culture of the Inuit is intertwined with the hunt of the Polar Bears. In addition, some Inuit people believe that keeping the Polar Bear quotas low puts their the communities at risk as they see danger when Polar Bear populations are too high. They argue that more Polar Bears must be killed to defend the human population from attack.

Why should we care if Polar Bears do go extinct? What does that mean to the anthropogenic mind? While Ian Stirling does not say directly that he supports Inuit hunting, however, may one infer this because of the lack of discussion of this important aspect in his book *Polar Bears: The Natural History of a Threatened Species*. It is this dichotomy that Stirling presents to the reader when he ignores overhunting/overharvesting of Polar Bears but at the same time acknowledges the importance of their existence. He acknowledges the importance of not allowing these animals to become extinct since Polar Bears are predators at the top of our food source. In an interview with Polar Bear International, Stirling offered several reasons why people should be concerned about the decline of Polar Bear population. In his interview, (<https://www.youtube.com/watch?v=h31vXBofQDU>), Stirling states:

“It is really important for us to be concerned about large animals at the top of the food chain whether they are whales or tigers or bears because a healthy bear population or a healthy tiger population indicates that probably the ecosystem as a whole is healthy. [sic]As far as here in North America, when we look at [Polar Bears], this is more than a national heritage. It is a continental heritage. It is a

circumpolar Arctic heritage. [Polar Bears are] one of the most wonderfully adaptive animals living in a very hostile environments, hostile to humans anyways, [sic], not hostile to Polar Bears, because they are superbly adaptive to live in this environment. [sic] That in a sense is also their greatest problem because they are very large animals and they're very specifically and highly adapted to live within very tight constraints in a type of ecosystem. [sic] They are dependent on very specific types of food. [sic] So when the climate warms their habitat is lost through the melting of the sea ice. [sic] They can't get at those seals anymore. There is no way that they can adapt themselves quickly enough to be able to move into another environment.”<sup>30</sup>

Perhaps the most important part of this quote is Stirling's mention that Polar Bears and their environment are more than a national (and perhaps by inference indigenous peoples') heritage, but rather share continental and circumpolar heritages. By extension, it seems quite reasonable to conclude that Polar Bears, like Panda Bears, lions, tigers, and other exotic animals are world heritages. A fair question would be “who should be allowed to hunt polar bears?” I posit that no individual group (e.g., Inuits) or nation should be allowed to contribute Polar Bear extinction, especially via hunting which can be relatively easily curtailed. Hunting of Polar Bears is truly a far more tractable and perhaps more important problem than the nebulous global climate change problem. This is not to say that global climate change is not a major priority and Stirling makes an important case for Polar Bears

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<sup>30</sup> Polar Bear International. “A Talk with Scientist Ian Stirling; Tundra Connections Webcast,” YouTube, uploaded October 22, 2012, [<https://www.youtube.com/watch?v=h31vXBofQDU>], accessed 21 July 2015.

and loss of habitat due to climate change. However, when Polar Bears face loss of habitat and being overharvested, this means the Polar Bear faces two human caused factors. Global climate change affects everyone including Polar Bears but overharvesting affects Polar Bears in such a direct way that not doing something that we as humans could easily manage by simply putting Polar Bears on the Endangered Species List would be a tragedy.

## **Future Research**

My research has examined the factors that constitute the threats to Polar Bear populations in the short run. What I argue is that overhunting/overharvesting is an imminent, short term threat to Polar Bears that needs to be addressed immediately. While global warming will be a threat to Polar Bears in coming decades, it is possible that Polar Bears may be extinct before global climate change becomes a factor in decimating Polar Bear populations. An examination of the near-term threats to Polar Bears, a focus on overharvesting will provide a better solution to Polar Bear population management.

It is difficult to tell at this time whether Polar Bear numbers are on the decline but it appears that there might not be the increase that some scientists claim. More reliable data and research are needed to study the results from current and future models to determine if they effectively include all pertinent environmental and human stress factors. It is clear to me from the research I have done that politics and economics play critical roles that need to be properly considered and evaluated to determine whether to list Polar Bears on the endangered species list. It is difficult to imagine that Polar Bears are increasing in numbers when Polar Bear hides are in high demand and when Polar Bear hunts are becoming more popular. My conclusion is that without understanding the input data and the science used for population density models, it is not possible to effectively estimate Polar Bear population numbers and to make wise management decisions.

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## Volume VI Contributors



**Jorge Dominguez** graduated in June 2016 with a Bachelor's Degree in Economics and Mathematics from the University of California, Santa Barbara. After graduation, Jorge plans to acquire work experience in business and economics before beginning a Master's of Arts program in Economics at Columbia University in the fall of 2017. Ultimately, he will be pursuing his doctorate in economics. His research interests are in behavioral and experimental economics. Direct correspondence to: [jorgeldominguezr@gmail.com](mailto:jorgeldominguezr@gmail.com)



**Sylvia Garcia** transferred to the University of California, Santa Barbara from Santa Barbara City College after serving ten years in the Army as a Psychological Operations Specialist. She will graduate in early 2017 with a double major in English and Physical Geography. She is interested in human and animal relationships. Her interests include Polar Bear populations and their possible extinction as well as animal and human population correlations in Africa. She plans to apply to graduate school of Fall 2016. Direct correspondence to: [sylvie.c.garcia@gmail.com](mailto:sylvie.c.garcia@gmail.com)



**Eugenie (Genie) Guzelian** graduated from The University of California, Santa Barbara in June 2016 with a Bachelor of Arts in Psychological and Brain Sciences and a minor in Applied Psychology. Under the guidance of Dr. Karen Szumlinski, she focused on the neuropsychological aspects of psychology while maintaining her passion for clinical psychology by working as a behavioral therapist. Genie is interested in the comorbidity between anxiety, mood, and stress disorders. She plans to explore new areas of research on the East Coast before applying to PhD programs in Clinical Psychology for fall 2017. Direct correspondence to: [eugeniaguzelian@gmail.com](mailto:eugeniaguzelian@gmail.com)



**Jamelia Harris** graduated with Honors Distinction from the University of California Santa Barbara in 2016 where she double majored in Black Studies and Sociology and minored in Education. Her primary research interests explore residential zoning policies, mass incarceration, school desegregation, the education debt, intersectionality, and the criminalization of Black bodies in urban settings. In fall 2016, she will begin the Urban Schooling doctoral program at UCLA's Graduate School of Education and Information Studies. She is committed to diminishing the

educational opportunity gap for Black youth through developing and influencing policies that address the social and structural barriers they confront. She commits her research and advocacy to the advancement and liberation of Black people across the diaspora. Direct correspondence to: [jameliaharris94@yahoo.com](mailto:jameliaharris94@yahoo.com)



**Jacqueline Lepe** graduated from the University of California, Santa Barbara in June 2016, with a double major in Sociology and Spanish and a minor in Feminist Studies. Her main research interests lie in juvenile justice and educational equity, specifically how young women of color are criminalized and pushed into the sexual-abuse-to-prison- and the school-to-prison pipelines. During her academic career at UCSB, Dr. Victor M. Rios served as her mentor in the Department of Sociology as she worked on the research project titled, “Overcoming Adversity: Non-Cognitive Skills Development in High School Push-Outs.” Additionally, Dr. Kiminori Nakamura served as Jacqueline’s mentor at the University of Maryland, College Park during the summer of 2015, where she produced the bibliographic essay published in this journal. Jacqueline will be attending the University of California, Berkeley in the fall, working towards her PhD in Sociology, and hopes to become a professor. Direct correspondence to: [jacqueline.lepe@yahoo.com](mailto:jacqueline.lepe@yahoo.com)



**Anibal Lopez** is a 2016 graduate of the University of California, Santa Barbara. Anibal’s main interests lie in the intersection between law and business, specifically regulation of the financial sector. His research interests include decision-making in the Federal Reserve System of the United States and how such institutions react to financial crises. He aims to undertake employment as a legal researcher or adviser to a government institution where he can help shape regulation policy and prevent the risky behaviors that led to the 2007 Recession. Anibal will be pursuing a JD at the University of Iowa, College of Law in the fall of 2016. Direct correspondence to: [lopez.ani@outlook.com](mailto:lopez.ani@outlook.com)



**Adriana Sánchez** received her Bachelor of Arts in Psychology with a minor in Applied Psychology from the University of California, Santa Barbara in June 2016. Her research interests include educational attainment and persistence, resilience and thriving, and subjective well-being as it pertains to underrepresented/underserved populations, including Latina/os. Adriana is continuing her studies at UCSB in the PhD program in Counseling Psychology in the department of Clinical, Counseling, and School Psychology.

Direct correspondence to: [contact.asanchez@gmail.com](mailto:contact.asanchez@gmail.com)



**Bertin Solis** graduated from the University of California, Santa Barbara in June 2016 with a Bachelor of Arts in Sociology and a minor in Educational Studies. His research interests center on diversity and social justice in education. Working with Professor Richard P. Duran and doctoral candidate Zuleyma Rogel at UCSB, Bertin engaged in a case study examining how Latino immigrant parents as part of a parent leadership program advocated for their children's education and for the improvement of their local schools. Working with Professor Frances Contreras at UC San

Diego, Bertin researched various issues on Latino and African American student access to the UC campuses. Bertin will begin his doctoral program in Education at UCSB in fall of 2016. Direct correspondence to: [Bertin.solis.rc2012@gmail.com](mailto:Bertin.solis.rc2012@gmail.com)



**Paola Villegas** graduated with Honors Distinction from the University of California, Santa Barbara in June of 2016 with a major in History of Public Policy and a double minor in Labor and Spatial Studies. Paola will begin her PhD program in Sociology at Northwestern University in fall 2016. Her research interests include housing insecurity, particularly the impact of eviction and overcrowding among Latino families, as well as contested public spaces, specifically murals and parks in communities of color. Interdisciplinary and action-oriented research is both a passion and

priority for Paola. Direct correspondence to: [paovillegas09@gmail.com](mailto:paovillegas09@gmail.com)



**Ronald E. McNair** was born on October 12, 1950, in Lake City, South Carolina. Son of an auto mechanic and a high school teacher, McNair attended the local high school, graduating as class valedictorian. He went on to earn a bachelor's degree, magna cum laude, in Physics, from North Carolina A & T University in 1971 where he was named a Ford Foundation Fellow and a Presidential Scholar. McNair met a goal that he had set in high school to

complete his PhD within 10 years. Five years after graduating from college, he received his doctorate in Physics from M.I.T.

Nationally recognized for his work in laser physics and the recipient of numerous fellowships, honorary degrees, and commendations, Dr. McNair was also a sixth degree black belt in karate and an accomplished saxophonist. In 1978, while working at the Hughes Research Laboratory, he was selected for the NASA space program. He was the second African American to fly in space. On January 28, 1986, Dr. McNair, along with 6 other astronauts, died when the space shuttle Challenger crashed exploded and crashed into the ocean moments after lift-off.

After his untimely death, Congress provided funding to start the Ronald E. McNair Post-Baccalaureate Achievement Program. UCSB's McNair Scholars Program is dedicated to helping promising scholars follow Dr. Ronald E. McNair's path of scholarship and service.





The cover features a photograph of the entrance to UCSB's newly expanded Davidson Library. Designed by the firm of Pfeiffer Partners Architects, the expansion adds 60,000 square feet to the existing building. First proposed over a decade ago, construction took two years to complete. Officially opened on January 13, 2016, the expanded, renovated, and reinvented library offers the latest in technological innovation to create a state of the art facility for collaborative, interdisciplinary research and education. In keeping with UCSB's commitment to energy efficiency and sustainability, the U.S. Green Building Council has certified the new Davidson Library as a LEED (Leadership in Energy and Environment Design) Gold building.

