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Anastasia C. Wilson
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**THREE ESSAYS ON THE
ECONOMICS AND POLITICAL ECONOMY
OF THE
“SCHOOL-TO-PRISON PIPELINE”**

A Dissertation Presented

by

ANASTASIA C. WILSON

Submitted to the Graduate School of the
University of Massachusetts Amherst in partial fulfillment
of the requirements for the degree of

DOCTOR OF PHILOSOPHY

September 2020

Department of Economics

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DEDICATION

To those who grieve.

ACKNOWLEDGMENTS

Labor is always a social process, and this dissertation is no exception.

My sincerest gratitude goes to my dissertation chair, Dania V. Francis, whose guidance, encouragement, and rigor has taught me how to think, write, and analyze like a (political) economist while anchoring analysis in frameworks of social and economic justice. Since I wandered into the UMass Amherst Economics Department when enrolled in continuing education courses, Michael Ash has been a consistently encouraging and supportive professor, and shown me how to pursue research that matters to public policy and towards building a better world. Kathryn McDermott provided great guidance, from the perspectives of both education and public policy, and encouragement of critical thinking. Working on research with Professors Francis, Ash, and McDermott was a transformative experience, teaching me the ins and outs of data analysis, while keeping an ear to the ground to understand how matters of education are matters of economic and social justice. There are also many other members of the Economics Department and campus to whom I owe great thanks along the way for their coaching, support, and help, in particular Mark Landeryou, Nicole Dunham, Nancy Folbre, David Kotz, Carol Heim, Gerald Epstein, John Stifler, Graciela Monteagudo, Max Page, Jackie Brousseau-Pereira, and quite literally

everyone of the UMass Amherst Economics Department. I also give gratitude to the memory of important teacher, Stephen Resnick.

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I cannot write these acknowledgments without acknowledging that this dissertation was completed during a global pandemic, economic crisis, and protests and uprisings in support of Black Lives Matter. I thank every organizer, protester, and participant in collective struggles historically and currently, especially those students who have organized for decades and continue organizing for racial justice in schools.

That said, all errors and mistakes are my own. To paraphrase a favorite poster in the Center for Popular Economics' office: onward towards building an economy and a world that is healthy for children and other living things.

ABSTRACT

**THREE ESSAYS ON THE
ECONOMICS AND POLITICAL ECONOMY
OF THE
“SCHOOL-TO-PRISON PIPELINE”**

SEPTEMBER 2020

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This dissertation examines the political economy and economics of the school-to-prison pipeline (STPP). In my first essay, I interrogate approaches to the economics of the STPP. I then situate my analysis within the theoretical lens of Robinson (2000)’s racial capitalism, to show a political economy approach for understanding the nexus of public schooling and the carceral state. Building on the concept of enclosure as presented by Sojoyner (2013, 2016), I describe the emergence and impacts of

the STPP to show how this dynamic functions as a racialized *economic* enclosure, through punitive discipline, exclusion, and criminalization.

Next, I examine the relationship between carceral school environments and students' expectations of their future educational attainment. Using the National Crime Victimization Survey: School Crime Supplements 2005-2015, I show that visible and intrusive security measures- especially metal detectors- negatively impact students' expectations of their future educational attainment, and for Black and Hispanic or Latinx students the effects tend to be larger. I interpret these results as evidence of the ways in which carceral schools work to enclose opportunity away from students, using a conceptual framework including Shedd (2015)'s notion of perceptions of injustice.

My final essay examines the role of school discipline in college-going decisions and outcomes.. This study uses the High School Longitudinal Survey of 2009 to show how experiencing suspension impacts students' decisions to apply to college, and admissions and enrollment outcomes, finding evidence of a negative impact of high school suspensions on a student's decision to apply to college. Similar to labor markets and criminal records, these findings provide evidence that school discipline, when acting as a negative credential, may potentially work to enclose and limit options and pathways for post secondary education.

In the enclosure framework, I demonstrate these two particular instances of how schools oriented towards punitive discipline and criminalization limit education and economic opportunities thus perpetuating and compounding inequality by race, ethnicity, gender, class, and other dimensions. Ameliorating these issues requires a

broad and radical approach towards transforming schools, and the economy, as sites of economic liberation rather than discipline and criminalization.

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INTRODUCTION

This dissertation was completed at an inflection point. Acts of violence sparked protests, and uprisings against police brutality and state violence in the United States and around the globe, asserting: Black Lives Matter. The global coronavirus pandemic and its rising death toll brought the deepest economic recession since the Great Depression, resulting in unprecedented levels of unemployment and economic distress with the most profound effects on Black communities, as well as other communities of color and those economically marginalized. The pandemic held hostage millions of workers, especially essential workers, in a capitalist system asserting profit rates take primacy over human lives. The virus, though indiscriminating in its nature, navigated the built economic landscape to target those made most marginalized and vulnerable by racial capitalism, patriarchy, and settler colonialism.

In its most succinct form, this pandemic became a story about care homes, slaughterhouses, and prisons. The three hotspots for infection and COVID deaths happen to also be three illustrative spaces of racial capitalism and settler colonialism built on patriarchy. The country with the highest prison population in the world, highest incarceration rate, and most bloated policing budgets of OECD countries turned even more repressive during the pandemic, subjecting thousands of prisoners to exposure to the deadly virus and forcing solitary confinement, while those outside the

prison walls remained subject to ongoing aggressive and brutal policing. Care homes for the elderly, disabled, and veterans too became spaces of confinement and deadly exposure, with workers in these facilities often devalued and underpaid for the work of care. Slaughterhouses, a vignette of an extractive and environmentally destructive capitalist enterprises already with dangerous working conditions, became petri dishes for the coronavirus, risking their precarious workforces to life-threatening infection. With school canceled, at least the education system, already under the pressures on ongoing austerity, was spared as viral loci. But the switch to online learning and work left households facing a difficult balance of caregiving, teaching, and left many without adequate resources.

By the close of May 2020, school was either held remotely online or already out for the summer, and the uprisings against police brutality- found in nearly every city and even small towns across the country, and often organized by youth- amplified the voices of young students leading marches and organizing their communities. These students are asserting that their schools, already more focused on policing, security equipment, and getting kids in trouble than learning, were not safe for them to begin with even *before the pandemic*. A young student from Commerce High School in Springfield Massachusetts asked in reference to a recent case of police brutality in Springfield Public Schools in which a school resource officer assaulted a student in response to swearing: why is it that a student copying a paper faces more consequences than an adult pushing a middle schooler to the ground?¹

¹See the Pioneer Valley Project website for more information on the incident and student organizing for police free schools: <https://www.pioneervalleyproject.org/>

The answer to her question resembles too why coronavirus outbreaks so acutely struck care homes, slaughterhouses, and prisons: our lives are embedded an economic system of heteropatriarchal racial capitalism, based on exploitation, dispossession, and extraction, often by brute force. With the economy lacking any semblance of a welfare state, undervaluing caring labor and often neglecting care altogether in the form of what Ruth Wilson Gilmore calls *organized abandonment*, and overinvested in punishment through the carceral state, these systems work to uphold and justify the deep hierarchies of race, gender, class, citizenship, and other axes of oppression (Gilmore 2011). But, even though this deeply unequal and often violent economic system persists, it does face the constraints of solidarity and action among those its exploits and abandons.

At a June 2020 protest in Northampton, Massachusetts a young girl spoke in reference to the Civil Rights Movement: “My grandmother was in these protests when she was 15 years old. When I’m her age, I don’t want to be protesting anymore.” I share her desire to see radical change.²

The complex history of racial capitalism woven into the fabric of the U.S. leaves complex question about our society and the economy. As the student asked: why is it that a student, who may assume school as the path towards uphold mobility and rewards for merit, faces more punishment for plagiarizing an assignment than an adult man employed by the state does for assaulting a child in a place of learning?

²See news coverage of this Black Trans Lives Matter protest in Northampton, Massachusetts on June 6, 2020: <https://www.gazettenet.com/Thousands-join-in-protest-Saturday-in-Northampton-34633876>

What does it mean that this public school in a deeply segregated city with one of the highest incarceration rates in the state serves predominately Black and Latinx students, was formerly under desegregation orders (though later appealed), and is now policed by a department routinely accused of brutality? What does it mean that this same school district, arguably on the northeastern most edge of the Rust Belt, has been subject to state school takeovers removing the community's autonomy and control over many of its schools and replacing democratic control with an private executive management organization? What does it mean that this city- Springfield Massachusetts- had historically been a key site of abolitionist community, hosting the likes of Sojourner Truth and John Brown, as well as being home to the early movements for universal education in the U.S.?

This dissertation will only begin to answer the student's question and the subsequent questions outlined, but will describe a theory of racial capitalism, the carceral state, and education that can help us to begin understanding and arriving at an answer. Further, I will examine some the ways in which the nexus of schools and the carceral state *encloses* to borrow the term from Woods et al. (2017) and Sojoyner (2013, 2016), or limits access to, education from students using both the tools of applied econometrics, alongside interdisciplinary frameworks.

The following outlines my endeavor. First, I outline a political economy approach to understanding the role of education in racial capitalism and the carceral state. I survey contending approaches to understanding education, from neoclassical economics, feminist economics, and Marxian economics and describe their limits in understanding the role of the carceral state in schools. Next, I present an interdisci-

plinary (or to borrow the term from Meiners (2007) antidisiplinary) framework from scholars across diverse fields to show that, beyond just a so-called school-to-prison pipeline, the carceral state in schools works to create educational enclosures that perpetuate capitalist exploitation and expropriation, and uphold and even legitimize racial, class and gender hierarchies. This framework works to show that limited educational opportunities are not the result of “poor choice” under a rational model actor assumption, but instead are structurally embedded in a public school system historically designed to uphold a racial capitalist order. The additional essays will address how this nexus of schooling and the carceral state, through policing, security, and discipline in schools, works to perpetuate and uphold such inequalities in access to education, especially higher education. The second explores how school discipline may “mark” students creating barriers to the process of college applications and admissions. The third essay examines the role of the school environment, including policing, metal detectors, and other security equipment, in shaping students’ expectations of educational attainment. I do not posit that higher education is always the desired outcome or that going to college ameliorates the issues of the carceral state and unequal schooling. In a practical sense, despite rising costs and mounting debt burdens that call into question the economic mobility associated with college-going, a college credential remains an important buffer in today’s labor market and economy. That considered, both of my empirical results are framed as educational and therefore economic enclosures that help us understand the ways in which inequality under racial capitalism is maintained and manifests, and points towards potential solutions for a more equal and liberatory path for education and the economy.

CHAPTER 1

SCHOOLING IN RACIAL CAPITALIST AMERICA: TOWARDS A POLITICAL ECONOMY OF EDUCATION AND THE CARCERAL STATE

“...For education among all kinds of men always has had, and always will have, an element of danger and revolution, of dissatisfaction and discontent.”

*W.E.B. Du Bois in **The Souls of Black Folk***

1.1 Introduction

The issue of the school-to-prison pipeline (STPP) presents a profound contradiction in education in the United States: how does education, an institution assumed to be universal and equalizing, instead work to perpetuate and compound inequalities by race, gender, sexuality, and other dimensions, particularly through the use of school discipline and links to incarceration? From an economic standpoint, it is unclear how or why subjecting students to harsh discipline practices, prison-like school environments, and the use of the criminal justice systems in school would proliferate, as the trend presents mounting costs to schools in terms of time, equipment, and personnel and simultaneously creates costs to individuals, communities, and the economy in terms of academic outcomes and increasing likelihood of incarceration. Given these

confounding facts, frameworks in economics for understanding the role of education in the economy fall short of being able to explain the development of the STPP and therefore for being able to comprehensively address solutions to the issue.

This essay will provide an overview of the so-called STPP, tracing its development alongside the carceral state, where schools increasingly practice punitive and sometime violent forms of punishment, exclusion, and interaction with the criminal justice system with alarming disparities by race and gender. I then provide a comparative analysis of contending theories of the economics of education to see how each could analyze this issue: neoclassical human capital theory, Marxist economic approaches to education, social reproduction theory and models of intersectional group conflict. In interrogating human capital theory as well (Becker 1968)'s economics of crime, I show how this approach can be implicated in providing the ideological backdrop for the development of increasingly punitive, carceral schools, while also accepting that the framework does lead to important empirical documentation of the disparities faced by students. However, a strict human capital framework is unable to accommodate or account for structural issues of power and inequality. I then examine critiques from Marxist theory, that show education a means of legitimizing inequality and blurring class relations, but note how this intervention is bereft of an adequate analysis of race and other axes. I also examine how social reproduction theory, as well as approaches based on intersectional group conflict, importantly integrate analyses of class alongside race, gender, and other dimensions. But, I critique this approach for assuming education to always act as a public good to everyone's benefit.

Given these limitations, I synthesize approaches to understanding racial capitalism, the carceral state, and public schools. I situate my analysis within the broader context of *racial capitalism*, the theory of capitalism described by (Robinson 2000) showing how racialization and racial hierarchy been integral into the capitalist system since its beginnings, and therefore class, race, and other categories cannot be simply reduced to functions of one another.¹ Given this fact, I describe the development of public education and how the landscape of class and race in the United States, particularly during Reconstruction (1860-1880) and then later during the Civil Rights Era (1950s-1970s following the timeline of school desegregation), sets in motion the preconditions for the emergence of the STPP. I relate these persisting inequalities in schooling to the drivers of the racial wealth gap. Alongside the STPP, I explore the development of the carceral state, and arrive at understanding racial capitalism as embodying dual logics: a logic of capital accumulation or exploitability and a logic of disposability (Wang 2018). These two logics help to explain the rise of policing, imprisonment, and carceral apparatus in the neoliberal era (1980-present), despite ongoing austerity against public spending, including in schools. Here I show the disproportionate resources schools dedicate to discipline and criminalization, despite an economic environment where schools face ongoing budgetary pressures.

I then present an alternative framework for understanding how public education functions as a part of this carceral state under racial capitalism. Through a histor-

¹Here, I also recognize the role of heteropatriarchal institutions too as predating and integral to capitalist development. Issues of gender, sexuality, disability, and their intersections with race and class are central to the STPP issue, but this essay focuses on understanding the dynamics of how the nexus of the carceral state and public schooling reinforces racial inequality.

ically grounded analysis, I show how public education acts as an *enclosure*-creating barriers to, limits to, and exclusion from education and economic opportunities. The term enclosure builds on the use by (Woods et al. 2017, Sojoyner 2013, 2016) to describe how public education through its unequal structure has worked to maintain forms of inequality- especially racial inequality- and how the intersection with the carceral state during the neoliberal period has created enclosures for students through punitive discipline, exclusion, incarceration, and underresourced school environments, as well as through reforms aimed at privatization and the removal of community democratic participation in and control of schools (Lipman 2011). This framework allows us to view the STPP issue more broadly, and to illustrate how even well-intentioned policies and actors may work to perpetuate these dynamics.

Importantly, the enclosure framework shows how public education upholds, legitimizes, and reproduces the inequalities by race, gender, class, and other dimensions endemic to the structure of racial capitalism. Because this critique implicates the structure of racial capitalism itself and relates how inequality in the economy manifests within school environments, this view of the STPP then opens a wider discussion of economic and policy approaches to dismantling the conditions where schools serve as conduits to incarceration and economic exclusion, and serve as a justification for inequality.

1.2 The Problem Of Schools, The Carceral State, And Inequality: Interrogating The School-To-Prison Pipeline

Myths of meritocracy tied to education leave perplexing economic questions: if education supposedly offers upward mobility to those who work hard, why is it that the gains in educational attainment and achievement made over the last century since the introduction of compulsory schooling have instead tracked rising wealth and income inequality- including a *widening* the racial wealth gap? At the same time, if high school completion, college enrollment, and other indicators of educational achievement all typically associated with rising living standards and reduced crime are on the rise, why is it that the United States over that same time period became home to the largest prison population in the world? Similarly, if the goal of the education system is to prepare a productive workforce and provide equalizing opportunities, why is it that many schools continue to use punitive, exclusionary, and costly disciplinary practices that ultimately make students, and entire communities, worse off? Answering these questions requires not just undoing myths around meritocracy, but developing an understanding of the role education actually plays in the economy and its relationship to modern racial capitalism and the *carceral state*- the institutions of social control including policing, prisons, jails, and other systems of punishment and confinement (Berger 2019). The relative size and scope of the carceral state increases massively during the neoliberal era of roughly 1980 to present, when the United State's prison population balloons to be largest in the world, and the public education system is plays a central role.

1.2.1 Interrogating the School-to-Prison Pipeline

The nexus of public schools and the carceral state is often referred to as the school-to-prison pipeline (STPP), a catchphrase for describing the ways in which policies, practices, and environments in school push students out of education and towards interaction with the criminal justice system. Heitzeg (2009) provides a working definition:

In part, the school to prison pipeline is a consequence of schools which criminalize minor disciplinary infractions via zero tolerance policies, have a police presence at the school, and rely on suspensions and expulsions for minor infractions. What were once disciplinary issues for school administrators are now called crimes, and students are either arrested directly at school or their infractions are reported to the police. Students are criminalized via the juvenile and/or adult criminal justice systems. The risk of later incarceration for students who are suspended or expelled and unarrested is also great. For many, going to school has become literally and figuratively synonymous with going to jail.

Further, the use of physical security, such as metal detectors, contraband sweeps, locker checks, and other practices often work to heighten these dynamics by increasing the likelihood of students experiencing suspension and being criminalized at school Kupchik & Ward (2014), Hankin et al. (2011a).

But, the narrow pipeline metaphor though falls short in describing the complex and historical relationship between institutions of education and the carceral state in the United States- a relationship that works to uphold several forms of inequality, especially racial inequality. The pipeline metaphor of the STPP, along with other catchphrases like “Schools Not Prisons” as noted by Meiners (2016), poses education and incarceration as in opposition, as an either or choice, and therefore implying

more education as the “antidote” to mass incarceration. This framing suggests that small reforms of school discipline and other policies will work to limit mass incarceration and the carceral state, but this framing “obscures and potentially reinforces the wider, and yet always contested, heteronormative racialized project of public education.” (Meiners 2016). Further, the pipeline metaphor treats schools as a central conveyor of individuals into mass incarceration, therefore implying that the solutions lie strictly within school policy. While school policy clearly is important and potentially transformative, the pipeline metaphor does little to address the role of public education within the structures of the carceral state, anti-Black racism, and capitalism (Sojoyner 2016)². So what does this nexus of the carceral state and public schools actually look like, and how does it work to reinforce, uphold, and legitimize the economic inequalities of racial capitalism and the carceral state?

1.2.2 The Making of Unequal and Carceral Schools

While some accounts of public schooling in the U.S. show a march forward towards access and equality particularly in the proverbial Golden Age of education (Goldin & Katz 2008), schools historically have been weaponized to uphold the racial order of a settler colonial state founded on slavery: school segregation, assimilationist boarding schools, and others forms of oppressive schooling historically have been apparatuses of state violence against Black children, Native and Indigenous children, and other marginalized groups since British colonial settlement of North America

²Another framing for the nexus of the carceral state and public education is the *carceral continuum* as described by (Shedd 2015) in *Unequal City: Race, Schools, and Perceptions of Injustice*

(Wilder 2013).³ The roots of unequal public education can be traced back to the conflicts over Reconstruction following the end of the Civil War from 1860-1880. Du Bois (2007) in *Black Reconstruction* outlines the history of property tax funded public schooling, which from its inception creates a system of segregated and unequal schooling that left many southern schools for Black students underfunded. The interests of the white working class, the southern planter bloc, and the northern industrialists coalesced in opposition to dodge such taxation for the funding of public schools and the philanthropic interests of the northern industrialists. This creates a deeply unequal system of education, by design, for the maintenance economic exploitation and racial hierarchy to the benefit of industry (Du Bois 2007, Sojoyner 2016).

Still today, the American education system, while undergoing consistent reforms, remains deeply unequal across many dimensions, and the property tax based funding system described by (Du Bois 2007) continues to drive educational inequality, setting in motion the dynamics of disparities in school funding (Chetty & Friedman 2010). Housing and neighborhoods remain deeply segregated by race and ethnicity; what some researchers refer to as *hypersegregation* (Massey & Tannen 2015). These patterns are the result of decades of redlining, land grabs, discriminatory housing and lending practices, and outright discrimination in housing valuation that extracts wealth away from Black communities, as well as other marginalized groups, and fur-

³Both Wilder (2013) and Darity & Mullen (2020) especially note the role slavery in the system of higher education. While the Morrill Land Grant Act of Reconstruction provided the basis of public higher education, many institutions can trace their institutional wealth to the slave trade and the labor of enslaved people.

ther compounds the unequal structure of public school funding (Darity & Mullen 2020, Taylor 2019, Baradaran 2017, Rothstein 2017, Katznelson 2005). These entrenched forms of racism, that loot and extract wealth, create deep disparities in school funding and resources, and have maintained patterns of segregation within schools and effectively resegregated many American public schools once subject to integration orders (Fahle et al. 2020, Reardon & Owens 2014, Orfield 2001). Many of these dynamics too have been, in some places, exacerbated by school choice policies as well as the proliferation of charters schools, leaving under resourced districts subject to profiteering by for-profit educational opportunists, or what Noliwe Rooks dubs “segronomics” (Rooks 2017).

Resegregation as well as under funding are both associated with disparities in school discipline, arrest, and the pushing out of students towards incarceration (Cuelar & Markowitz 2015, Hirschfield 2008). Discipline itself, such as in and out-of-school suspensions, is deeply racially biased and highly associated with future incarceration and interaction with the criminal justice system (Owens & McLanahan 2020, Riddle & Sinclair 2019, Mittleman 2018). Not only do students face punishment and possible arrest within school, encounters with the carceral state, especially policing, occur also on the way to school and outside of school in neighborhoods, increasing students’ risk of interactions with police and the criminal justice system, as well as disrupting their learning and impacting academic achievement (Shedd 2015, Bacher-Hicks & de la Campa 2020, Legewie & Fagan 2019). Some note that the STPP and racial achievement gaps are deeply linked- two sides of the same coin as noted by Gregory et al. (2010)- however given the historical context of slavery, racial capital-

ism, and the deepening of the racial wealth gap as interconnected to the inequalities in schooling, a better description may be an educational debt imposed by these forms of structural racism, as proposed by Ladson-Billings (2006).

The preconditions for the STPP emerge *partially* from this history of unequal and segregated schooling in the U.S. Following the *Brown v. Board of Education* ruling against segregated schooling, the *Miliken v. Bradley*'s ruling against explicit inter-district segregation but not against segregation caused by white flight or school district secession, and the issuance of desegregation orders and busing programs in the 1960s and 1970s, some districts and states implemented policies to bring "law and order" to schools. These changes and methods of enforcing desegregation orders occurred within the context of from what Hinton (2016) describes as from the War on Poverty to the War on Crime, which used the carceral state as a means of regulating welfare programs and the economy in the midst of social unrest, thus expanding the role of policing, the criminal justice system, and setting into the motion mass incarceration. Schools, now supposedly more accessible and integrated, too were regulated by a "law and order" approach to enforcement. Early newspaper mentions of implementing physical security in schools comes as a response to race riots over school desegregation orders and busing programs. For example, a 1975 *The Associated Press* report notes that "The streets around South Boston High School were empty yesterday, except for clusters of police. Black and white pupils entered the building together for the first time this year, passing through metal detectors in the doorways to screen out any weapons. None were discovered." (The Associated Press 1975). The article described the nearly 1800 police officers and

100 U.S. marshals patrolling South Boston and Charlestown in the wake of the order. Desegregation orders, in certain districts, in part expand the role of policing and security in schools, and policing and police-led education programs in schools were deployed, especially to suppress schools as sites of student organizing for Black liberation struggles Sojoyner (2013, 2016).

1.2.3 Neoliberalism, Discipline, and the STPP

There are other important factors developing the relationship between schools and the carceral state. While the complex history of racial inequality, school funding, segregation, and the “law and order” politics emerging in response to the social movements created the preconditions for the STPP, the dynamics of punitive discipline and criminalization in school were amplified by additional economic, political, and social conflicts. In particular, the neoliberal era (or post-Fordist era) beginning in the 1980s embodied shifts in the political economy of the United States that included an attack on the welfare state- particular social programs-, the rise of precarious non-union work due to the dismantling of unions alongside deindustrialization, an emboldened free market ideology backing shifts towards privatization of the public sector, and a shift towards post-Civil Rights “race-blind” or “laissez-faire” racism (Bonilla-Silva 2006, Lipman 2011). Gilmore (2007) describes the confounding fact that as corporations and the capitalist class pushes for deregulation, privatization, an erosion of the welfare state, and a general “anti-government” ideology, economic interests also coalesced to increase the power of the state through policing, imprisonment, and expansion of the prison-industrial complex. In connecting this dynamic to

schools, labor markets, and the expansion of the carceral state in California, Gilmore (2007, p. 77) writes:

The spatial configurations of Los Angeles's secondary school dropout rates, heavy industry closures, and technopole development show how rates of underemployment and joblessness, while meeting a need for capital, are not apolitically visited upon workers (Oliver et al. 1993; see also Massey and Denton 1994): the "market" did not do it. Rather, the post-Keynesian state participated in the production of the relative surplus population through specific actions and inactions. Twenty years of laissez-faire economic policy have politically and ideologically freed capital to move (Oliver et al. 1994; cf. Bluestone and Harrison 1982). Defunded community-based organizations no longer provide services and training to youth, and abandoned educational programs no longer provide opportunity for advancement (Oliver et al. 1993). The state registers its indifference in the growing dropout rates- as high as 63-79 percent in some Black and Latino high schools (Oliver et al. 1993; cf. Horton and Freire 1990). Changes in public policy with respect to the working poor have contributed to the abandonment of entire segments of labor, with the result that the "social safety net has been replaced by a criminal dragnet" (Oliver et al. 1993:126).

For schools, this "anti-state state" becomes embodied in several ways. First, the general assault on unions and public spending also extends to schools, teachers, and school staff, giving way to neoliberal fixes such as school choice, vouchers, and charters, consistent with deregulation and free market ideology (Lipman 2011, Rooks 2017). Austerity economics adds budgetary pressure to schools, creating a cycle of underfunding. Gilmore (2007, p. 43) describes this in the case of California: "Proposition 13 shielded real property from periodic reassessment and set a maximum tax rate, thus depriving municipal governments of a prime source of revenue; as a result, whereas in 1977-78, K-12 school districts received 51.7 percent of their budgets from property taxes, the percentage was only 18.1 percent in 1988-9 (Chapman 1991:19).

The compensatory implementation of regressive taxes such as sales tax and user fees helped ensure that as local governments drew down their reserves and then tightened their belts, the poor would have higher relative costs and fewer services than their richer neighbors.’

Second, despite austerity, schools begin dedicating an increasing proportion of these restricted resources to punitiveness, and adopt even stricter discipline and crime policies. Enshrining this switch is the Gun Free Schools Act of 1994, part of a set of sweeping criminal justice legislation that creates zero-tolerance in both the criminal justice system and in schools. The Gun Free Schools Act of 1994 codes into law that students must be expelled from school for bringing a firearm to school and entrenches the relationship between the criminal justice system and schools (Heitzeg 2009). As part of the Violent Crime Control and Law Enforcement Act of 1994, these bills also bring about new funding sources for schools through the Community Oriented Policing Services (COPS) office, which offers grants for the hiring of school-resource officers and implementation of other security practices and equipment. The 1994 Crime Bill dedicated at least \$9 billion of funding to the COPS office Roth & Ryan (2000). A recent paper examining the impact of COPS grant funded school-resource officer, finding their association with increased discipline for Black students, notes that these grants cover up to \$125,000 in hiring funds for three years (Weisburst 2019). In an era of austerity, these funding sources are likely attractive to many districts. As the federal government dedicated increasing resources to criminalization in schools, this shift in focus was legitimized through the creation of racialized fears about youth violence such as the “super-predator” myth (DiLulio 1995).

The next piece of legislation which amplifies the carceral state in schools is the No Child Left Behind Act of 2001, which relies on high-stakes standardized testing, and linking school performance on tests to funding, teacher pay, and other resources. The changes under No Child Left Behind, particularly the use of high stakes testing, is empirically associated with increasing use of exclusionary school discipline (Wald & Losen 2003). Coupled with the Gun Free Schools Act, which gives resources and legal jurisdiction to criminalize students in school. Additional high profile acts of school violence coupled with these policies leads schools to become increasingly focused on punitive discipline, especially exclusionary discipline such as out-of-school suspension and expulsions, and criminalization through arrest in school and referrals to law enforcement. This link, between schools and the carceral state, is then dubbed the “school-to-prison pipeline”.

In fact, rates of school discipline have notably increased over time with these legal, political, and economic shifts. For example, data from Florida show that across elementary, middle, and high schools, in the 1972-73 academic year, estimates show just 6 percent of Black students, 3 percent of white students, 3 percent of Hispanic students, 3 percent of Native American students, and 1 percent of Asian or Pacific Islander students experiencing one or more out-of-school suspensions (Losen 2011). By 1988-9, 10 percent of Black students experienced suspensions, 5 percent of Hispanic, 5 percent of Native American, and just 4 percent of white students and 3 percent of Asian or Pacific Islander students. Starkly, by 2006-7, 15 percent of Black students experienced at least one out-of-school suspension, alongside 8 percent of Native American students, 7 percent of Hispanic students, 5 percent of white

students, and 3 percent of Asian or Pacific Islander students. In other words, for Black students, out-of-school suspension rates nearly tripled, and more than doubled by Hispanic and Native American students.

1.2.3.1 Discipline, Disparities, and Carceral Priorities

In 2012, following years of activism on the part of student groups and communities, the Obama Administration released a “Dear Colleagues” letter in 2014 advising schools to address racial, gender, and disability disparities in discipline, arrest, and referrals to law enforcement (Committee on the Judiciary 2012). Following this, the Office of Civil Rights created an online public release its Civil Rights Data Collection on racial disparities in schools. According to their Data Snapshot for 2011-12 academic year, at all age groups, Black students are three times more likely to be suspended than white students (U.S. Department of Education Office for Civil Rights 2014). Nationally in 2011-2, even at the preschool level, Black students represent 18 percent of enrollment, but 48 percent of suspensions. Roughly 82 percent of these children are suspended multiple times. Further, while boys receive the majority of suspensions, African American girls receive suspensions at a higher rate than girls of any other background, at a rate of about 12 percent according to the national data. Even more concerning, Black students are disproportionately arrested and referred to law enforcement in school. Black students represent about 16 percent of enrollment, but 27 percent of those students referred to law enforcement and 31 percent of those subject to school-related arrest.

More recent data from the 2015-16 academic year suggests that these disparities continue to persist. Figures 1.1 and 1.2 show ongoing disparities in students’ ex-

periences with in-school suspensions, out-of-school suspensions, in-school or school related arrest, and referrals to law enforcement according to the most recent 2015-16 Civil Rights Data Collection release. For Black or African-American female students, these students are about 15.5 percent of female enrollment, yet experience over 32 percent of female in-school suspensions, 43 percent of female out-of-school suspensions, 40 percent of female in-school or school related arrests, and over 33 percent of law enforcement referrals. Similar disparities are too faced by Alaska Native and Indigenous as well as Hispanic or Latino identifying students, with these disparities further compounded by disability status.

Again, Black or African-American students face deep disparities in experiencing school discipline. For example, while students identifying as Black or African-American males are 15.4 percent of male school enrollment, these students experience over nearly 30 percent of in-school suspensions, 22 percent of out-of school suspensions, over 12 percent of in-school or school related arrests, and over 20 percent of referrals to law enforcement. Here too, these disparities are also faced by Alaska Native and Indigenous students, and students with disabilities.

As the data continue to show, race, ethnicity, gender, and disability status relate to complex disparities in the likelihood of experiencing discipline in school, especially exclusionary discipline and criminalization.⁴ Experiencing these measures has detrimental impacts of students. First, the use of discipline itself is deeply racially biased,

⁴See the Civil Rights Data Collection 2015-16 National and State estimates for disparities in discipline, as well as enrollment, language programs, gifted and talented programs, retention, absenteeism, advanced placement, and other categories: https://ocrdata.ed.gov/StateNationalEstimations/Estimations_2015_16

with research showing the the disparities in discipline are largely driven by racial bias and biased perceptions of student behaviors (Owens & McLanahan 2020, Riddle & Sinclair 2019, Skiba & Williams 2014). Experiencing school discipline, especially suspensions that remove students from school, increase the likelihood of juvenile justice interaction, future arrest and incarceration, and is associated with decreasing education attainment in the long-run (Mittleman 2018, Shollenberger 2013). School discipline has also intersected with issues of fines and fees. For example, up until the 2012-13 school year, the state of Texas issued Class D Misdemeanor tickets for student behavioral issues, resulting in court appearances, a \$500 fine, and potential incarceration if unable pay fines or make court dates. While it is difficult to track the total number of students impacted by this policy, reports show that thousands of students were impacted (Texas Appleseed 2010). Some studies consider this as an economic cost, in terms of forgone education and earnings associated with the increased likelihood of dropout and incarceration (Rumberger & Losen 2016a). They show that for the U.S., school suspensions just in 10th grade leads to 67,000 dropouts and about \$35 billion in social costs.

Further, education budgets reflect the shifting priorities of the state away from education and towards incarceration. Despite ongoing fiscal conservatism in the neoliberal era, state and federal budgets consistency reflect prioritization of the carceral apparatus over care and education. Table 1.1 compare the change in State and Local expenditures for public PK-12 schooling versus Expenditures for Corrections from 1979-80 to 2012-13. While investment in the carceral state increased nearly seven fold, education spending's rate of increase was 107 percent overall. Examining these

total figures, rather than weighted per capita figures, allows for a view of the scope of spending on the carceral state. While over 50 million students attend public school in the United States, the population of incarcerated people in prisons and jails was just over 2.2 million making per incarcerated individual expenditures more than nearly three times that of expenditures per student.

But comparing expenditures between state and local provision of education versus that of corrections does not grasp the whole picture. As I have argued, schools too are a part of the carceral state and this is reflected within school staffing levels. While exact figures on spending in schools on policing, security, surveillance, and other aspects of the carceral apparatus is difficult to parse, Table 1.2 shows the relative staffing levels of sworn law enforcement officers and security guards, compared with counselors, nurses, psychologists and social workers.⁵

While many schools do have at least school counselors, the total number of law enforcement officers and security guards in schools outnumbers that of nurses, or psychologists, or social workers. Recent report have also estimated that a large portion of students attend school with law enforcement or security, but without the professionally recommended student to counselor, nurse, social worker, or psychologist ratios (American Civil Liberties Union 2019). These figures on spending and staffing reflect that despite budget austerity, the education system has prioritized its role in the carceral state over education, care, and meeting the needs of students. This reflects a larger point about the balanced budget conservatism of the neoliberal

⁵It should be noted that, like teachers, any staff may be complicit in discipline and criminal justice referrals.

era: balanced budgets are inherently racialized, creating tax cuts for the more white and wealthy tax base, while imposing regressive taxation on marginalized groups and allocating a growing portion of these funds away from social services and education and towards the carceral state (Sojoyner 2016, Plotkin & Scheuerman 1994).

1.2.3.2 Gender, Feminism, and the Nexus of Schooling and Prisons

While the analysis of the STPP often focuses on racial disparities and on the experiences of male students, gender as well as sexuality play an important role in understanding not just the STPP, but the carceral state broadly.⁶ In *Are Prisons Obsolete?*, Davis (2003, p. 61) calls for incorporating a nuanced understanding of gender in analyses of prisons:

Moreover, scholars and activists who are involved in feminist projects should not consider the structure of state punishment as marginal to their work. Forward-looking research and organizing strategies should recognize that the deeply gendered character of punishment both reflects and further entrenches the gendered structure of the larger society.

Similarly, understanding the gendered aspects of the nexus of public schools and the carceral state requires the same understanding of the role of gender. As the data from the Civil Rights Data Collection show, Black female students face deeply disproportionate rates of arrest and discipline in school at all ages. Black female students are roughly twice as likely to experience an out-of-school suspension as white boys, and the reasons for such disparities are not only due to racial bias, but

⁶See Morris (2015)'s *Pushout: The Criminalization of Black Girls in Schools* and Ferguson (2000) *Bad Boys: Public School and the Making of Black Masculinity* for further accounts of the role gender plays in the intersection of the carceral state and public schools.

compounded by both gendered and racialized perceptions of students. In the book *For the Children? Protecting Innocence in a Carceral State*, Meiners (2016, p. 60) describes the complex intersection of gender, race, as well as notions of childhood and who qualifies for the protective category of *innocence*:

Young men of color do experience high rates of suspension and expulsion and school-based racial profiling. They are frequently not viewed as child-like and the harm they experience does not seem to count. The criminalized black male youth is the statistic and the body most frequently circulated, even when young women of color constitute the fastest-growing population of those locked behind bars and research consistently illustrates that black girls also face high rates of punitive school discipline...Sexual and gender violence pushes girls out of school, and researchers have linked interpersonal sexual violence as a “powerful indicator” of young girls’ future incarceration...Research also highlights that “consensual same-sex acts more often trigger punishments [from schools and courts] than equivalent opposite sex behaviors”. These queer and gendered narratives are often minimized or erased in public examples describing the school to prison pipeline, erasing a more nuanced and complex analysis of identity and subjugation.

Like many issues, the STPP is not a monolithic or singular experience, and is profoundly shaped by many intersecting axes of oppression. This reality too points too needing a more nuanced understanding of exactly what the STPP really is, and whether or not the pipeline metaphor is analytically useful. Meiners (2016, p. 9) notes:

While the school to prison pipeline and the schoolhouse-to-jailhouse track are popular frameworks and have placed the question of the criminalization of U.S. youth in public schools on a global stage, these pipeline and railway images and metaphors increasingly obscure the wider and deeper analysis needed to build sustainable, dynamic, and stronger movements to end our nation’s commitment to policing and punishment. The metaphor of the school to prison pipeline erases the historic and ongoing

criminalization of many communities, suggests that the solution is more education or better discipline policies, and overwhelmingly misses the intertwined centrality of capitalism, heteropatriarchy, colonialism, ableism, and white supremacy to the work of public education.

Meiners (2016) also interrogates the notion of the child, a special category unevenly applied across the boundaries of race, gender, sexuality, class, and other dimensions. The notion of the child- an individual without full economic participation or rights, is a problematic technology, and one that also confounds much of economic theory in understanding the value of, role of, and economic significance of the category of children.

Given this critique, to fully understand and interrogate the STPP, its development, and role in the economy requires not only a historically grounded framework, but ideally one which can account for the intersecting issues of the carceral state, gender and patriarchy, white supremacy and anti-Black racism, ableism, and capitalism. While I address how these issues overlap and intersect, this analysis focuses primarily developing a framework for understand the racial inequalities driven by the STPP.

To develop a framework for understanding the STPP given its history and complexities, I interrogate contending economic approaches to understanding the STPP, showing how neoclassical human capital theory, class-based Marxist approaches, social reproduction theory and group conflict theory fall short of providing an accurate, historically grounded, and nuanced understanding of the economics of education under the carceral state. I then synthesize a political economic approach, relying on Robinson (2000)'s notion of racial capitalism, Woods et al. (2017), Sojoyner (2013,

2016)'s use of enclosure, and political economy approaches to understand how public education is central to the carceral state, and to the upholding and legitimizing of inequalities of racial capitalism.

1.3 Contending Economics Approaches To Education: Neoclassical, Marxist, And Group Conflict

To build a political economy of education that can accommodate not just a labor market analysis of education, but also an analysis of the nexus of the carceral state and schooling, persisting inequalities by race, gender, and other axes, as well as the role of education systems in maintaining economic inequality in communities, I first consider three contending, though sometimes intersecting, approaches to the economics of education: the neoclassical human capital model, the Marxist approach to education, and feminist interventions drawing on social reproduction theory and intersectional group conflict. In describing each, I show the limitations of each for understanding the emergence and function of the STPP. I then situate my analysis in a theory of racial capitalism, and present a framework of understanding the STPP as a racialized economic enclosure.

1.3.1 Neoclassical Economics: Human Capital and Crime

Neoclassical economics approaches the economics of education through *human capital theory*. Becker (1993) develops the theory that human capital conceptually includes the stock of talents, skills, knowledge, and productive capacities of individuals in the economy. Individuals, as well as in some cases firms and society as a whole, invest

in these stocks, via education and training, reaping the returns on investment in the form of increased earnings- a theory rooted in the assertion that human capital improves productive capacities and therefore the wage since wages are assumed to be the marginal product of labor. Underlying this theory is the *rational actor model*, which asserts that such decisions are made by economic agents with perfect information about the returns to education, and that such decisions are made when there is a benefit to be had.

This viewpoint of seeing human capital as an investment with a rate of return underlies and justifies many of today's policies. Public education is often viewed as having a society-wide benefit, therefore justifying public investment in such a public good. But similarly, higher education is often viewed as having particular private benefits to individual's incomes, and this thinking is often used as the rationale behind student debt. The human capital model, which seeks to show the relationship between education, earnings, and other outcomes, does however allow us to begin examining and documenting disparities in this relationship based as race, class, gender, and other dimensions by empirically demonstrating such disparities. While human capital approaches do make important contributions to documenting disparities and discrimination, the theory lacks the capacity to take into account historical and structural inequalities that regulate access to, costs of, and the benefits of human capital investments. Similarly, extensions of this model, such as ?'s model of labor market signaling to accommodate issues of imperfect information in labor markets that may lead to discrimination, but as Darity (1982) points out, while this approach acknowledges imperfect competition in labor markets, the underlying assumption of

“exogenous” preferences based on race, gender, and other dimensions are unable to be explained.

Second, human capital theory, by construction, sees inequalities in achievement and outcomes as individual deficits, rather than the result of structural inequalities. Hamilton & Darity (2017) show that this is a flawed view that ignores the structural barriers to education, that also work to compound the racial wealth gap. Further, human capital theory, specifically in regards to education, assumes education always improves the position of the individual. The problem of the STPP, and the ways it creates barriers, costs, and outright violence, confounds this theory. These critiques of human capital theory in relation to understanding racial inequality are similar to that of Darity (1982) who explains:

Becker’s original theory could explain why workforces might be segregated, but it could not- on its own assumptions- explain enduring differences in earnings between Blacks and whites. In his model racial wage differentials are necessarily a short-run or “disequilibrium” phenomenon. Yet racial differentials have persisted for more than 100 years since slavery ended in the United States. Thus the actual long-term dynamics of the labor market cannot be reconciled with Becker’s pure labor market discrimination explanation.

It should also be noted that Becker (1993)’s work on neoclassical human capital theory and the reliance on the rational actor model mirrors his work on the economics of crime (Becker 1968). Relevant to the STPP, the economics of crime posits, again, that crime is a *rational decision* where violators of law do so for economic benefits. To prevent this then, the economic costs of violating the law needs to exceed the economic benefits, leading Becker (1968) to focus on the deterrence effect of punishment. I would argue that as Becker’s economic thinking about crime legitimized the

shift to “law and order”, and served as an ideological backdrop to some of the most violent ideas from social science that directly influence the policies of the STPP: broken windows policing and the “super-predator” myth (Wilson & Kelling 1982, DiLulio 1995)⁷

While human capital theory has made important contributions to our understanding of the role of education in individual outcomes and economic production, and the framework can be applied to empirical documentation of disparities and discrimination, human capital theory and the rational actor model are limited for analyzing the contradiction of the STPP. In many ways, the theory, even with best intentions, falls into the the same problem as the school-to-prison pipeline framing itself: lacking a larger analysis of the carceral state, structural racism, and capitalism, and posing individual or school-level solutions to broad social and economic problems. Further, in certain instances, human capital theory alongside the rational actor model of crime, has in part worked to justify and legitimize aspects of punitive discipline in schools.

1.3.2 Marxist Approach to Education: Schooling in Capitalist America

While neoclassical human capital theory offers limited insights into the contradiction of the STPP and issues of the carceral state in schools, Marxist economic theory

⁷Fears of youth violence predated the “super-predator” myth, including in an early national report on school safety following school busing programs (National Institute of Education 1978). Wang (2018) extensively discusses the role of the “super-predator” myth in shaping the juvenile justice system, particularly juvenile life without parole sentences. Hinton (2016) offers an extensive account of the development of juvenile delinquency laws in relation to mass incarceration.

intervenes with an alternative approach. Like the above analysis of human capital theory, Bowles & Gintis (1976) see the concept of human capital as working to justify and obscure inequalities, and in their analysis specifically focuses on the inequalities caused by *class exploitation*. With that insight, Bowles & Gintis (1976) develop their correspondence principle, which argues that school as institutions embody and reflect the economic and social relations in which they are embedded- which are the economic and social relations of capitalism. Education has two purposes: imparting actual technical skills and knowledge, and *disguising* class relations in such way as to maintain the social, political, and economics conditions of existence for the capitalist system. Schools not only develop the technical and social skills of students to increase worker productivity, but also as they put it “defuse and depoliticize” class relations through the guise of meritocratic achievement and credentials. Bowles & Gintis (1976, p. 11) note:

Education in the United States plays a dual role in the social process whereby surplus value, i.e., profit, is created and expropriated. On the one hand, by imparting technical and social skills and appropriate motivations, education increases the productive capacity of workers. On the other hand, education helps defuse and depoliticize the potentially explosive class relations of the production process, and thus serves to perpetuate the social, political, and economic conditions through which a portion of the product of labor is expropriated in the form of profits. This simple model, reflecting the undemocratic and class-based character of economic life in the United States, bears a number of central implications which will be elaborated upon and empirically supported in the sequel.

They describe five ways this contradiction functions including the assertion that education itself does not determine inequality, but the structure economic system does. Next, they assert their *correspondence principle* that, “Third, the educational sys-

tem operates in this manner not so much through the conscious intentions of teachers and administrators in their day-to-day activities, but through a close correspondence between the social relationships which govern personal interaction in the work place and the social relationships of the educational system.” This correspondence principle describes how activities and relationships within school correspond to workplace relations under capitalism- hierarchical relationships with teachers like that of a boss, grades and rewards like that of wages, and discipline like that of monitoring and discipline in workplaces. They assert that this principles is not necessarily mechanistic and that the relationship between schooling and capitalism is as complex and nuanced as capitalism itself. Yet schools are sites of contradiction, including the contradictory fact that schools upholding the relations of capitalism also can potentially raise radical consciousness. Further, education, like capitalism, evolves into distinct and characteristic forms. Bowles & Gintis (1976) describe a shift from an entrepreneurial to a corporate economy, however their analysis is strictly class centered with limited analysis dedicated to understanding the role of race, racial segregation in education, and education’s role in upholding the racial order.⁸

The assertions in *Schooling in Capitalist America* help to explain, in part, the persistence of inequality despite educational gains, but because the roles of race, gender, and other axes are less central to their analysis, the lens offers a limited

⁸Bowles & Gintis (1976, p. 98) do note that their analysis does not focus on race or gender, and is not necessarily class reductive: “We make no claim that these distinctions originated as a capitalist contrivance, although a strong case could probably be made that the form and strength of both sexism and racism here are closely related to the particular historical development of class relations in the United States and Europe. Save credentialist distinctions, all predate the modern capitalist era.”

analytical framework for understanding the STPP. While the use of discipline in schools does certainly mimic labor discipline and compliance in the workplace, a strict correspondence to class structure does not explain the use of the criminal justice system in schools nor the reliance on *exclusion* from school, as there appears to be no clear link between exclusion and criminalization and the profit motive of the capitalist system. Their work does acknowledge, however briefly, the use of police power to “supress anti-capitalist alternatives” following the Civil Rights movement, which begins to consider the role that the carceral state plays in public schooling.

1.3.3 Social Reproduction and Group Conflict

Other approaches to understanding education in the economy draw on social reproduction theory, the feminist intervention in Marxist theory that seeks to understand the reproduction of labor power, or as some have intervened to show, the reproduction of capitalist society (Munro 2019). Some social reproduction theorists focus narrowly on the reproduction on labor in a capitalist economy, examining the role of unpaid household labor specifically, and this focus leaves a choice in who pays for and does the work of reproducing the people who do the work of production: domestic labor in the household or state provision through the welfare state (Bhattacharya & Vogel 2017). In this theory, education- particularly K-12 public schooling- is often lumped into the realm of state provisioned care and reproduction of labor. Munro (2019) points to the narrowness of this conception of social reproduction, which fails to consider the reproduction of *capitalist society as a whole*, and therefore reduces issues of reproductive labor to a debate over being paid or unpaid, state provisioned

or in the household, or simply reallocated between these without questioning how these activities continue to reproduce capitalist society and capitalist relations. This intervention is important because it creates an entry point for interrogating *exactly what* socially reproductive activities are *reproducing*. What if some forms of social reproductive labor in fact uphold violent and repressive aspects of capitalist society? What if even care labor, such as education, is implicated in this question?

Another approach to understanding education, Folbre (2012) argues that human capital, despite being a contested term, shows how human capabilities are co-produced in families, institutions, and society, and the value of this output is socially bargaining through group conflict by class, race, gender, ethnicity, citizenship, age, and other dimensions. This work importantly does critique the interpreted class-reductionist view of (Bowles & Gintis 1976), and builds a much more *intersectional* approach to understanding human capital, education, and public goods. Folbre (2012) argues that the complexities of overlapping group conflict can lead to counterintuitive results, like the persistence of economically inefficient institutions, and how these institutions influence group bargaining power and fallback positions. Work by Darity et al. (2006) shows the persistence of racial identity norms using a similar institutional and game theoretic approach.

Folbre (2012)'s approach, which creates a "hybrid" to human capital, game theoretical bargaining models, and the collective bargaining central to Marxist approaches, mainly considers bargaining over who bears the costs of social reproduction in the case of public goods- the state or households and individuals? Yet, not considered in this approach is the case when socially reproductive investments in human

capital or education are *not necessarily* public goods. For example, can education fully be considered a public good when aspects of public education are deeply entwined with the carceral state and to the detriment of students' outcomes? A public good for who and to whose benefit? Further, what if investment in education itself works to dispossess communities through dynamics like gentrification, as argued in work by Woods et al. (2017), Lipman (2011), Hackworth (2007). These complicating questions show that we must interrogate the idea of education as a neutral public good particularly in the cases where it is acting as an apparatus of the carceral state.

1.4 Political Economy Of Schooling, Racial Capitalism, And The Carceral State: An Enclosure Framework

The work of Bowles & Gintis (1976) highlights how education may mask class relations and exploitation, yet their approach centered on the relationship between schooling and capitalism is limited in its ability to explain the issue at hand of understanding the nexus between public schools, structural racism, and the carceral state. Social reproduction theory begins to pose questions about how the capitalist system is reproduced, but is too limited in acknowledging how education, as provided by the state, may socially reproduce aspects of the carceral state. Folbre (2012) offers a more intersectional framework for understanding education and the role of “competing hierarchies” of class, race, gender, and other dimensions, yet the assumptions regarding human capital and education as public goods are unable to explicitly pro-

vide a framework for understanding the case of how education may be used as an apparatus of the carceral state.

These frameworks still leave unanswered questions for understanding the issues at hand with the STPP: If schools work to prepare future workers for the capitalist system, why would school systems employ vast resources focused on discipline, physical security, and policing? If capitalist education seeks to prepare productive workers and blur class exploitation, why would the education system continue to uphold deep and visible inequalities by race, ethnicity, gender, and so on? Further, to what benefit to capital is this STPP, which works to exclude students from education systems and contribute to mass incarceration?

To build an analysis of the political economy of the STPP, I situate this work within a theory of *racial capitalism*. The notion of racial capitalism developed by Robinson (2000) acknowledges a crucial historical fact: systems of group-differentiated racial hierarchy pre-dated capitalism, and capitalism and its class relations developed *within* these systems of racialization. In *Black Marxism*, Robinson (2000, p. 2) explains:

Racism, I maintain, was not simply a convention for ordering the relations of European to non-European peoples but has its genesis in the “internal” relations of European peoples. As part of the inventory of Western civilization it would reverberate within and without, transferring its toll from the past to the present. In contradistinction to Marx’s and Engel’s expectations that bourgeois society would rationalize social relations and demystify social consciousness, the obverse occurred. The development, organization, and expansion of capitalist society pursued essentially racial directions, so too did social ideology. As a material force then, it could be expected that racialism would inevitably permeate the social structures emergent from capitalism. I have used the term

“racial capitalism” to refer to this development and to the subsequent structure as a historical agency.

Race then cannot be reduced to a function of class, but rather class- as defined by the relationship to capitalist production- develops within a pre-existing structure of racial hierarchy. Kelley (2017) gives an additional brief explanation of what Robinson meant by the term racial capitalism, explaining that capitalism was not simply “a revolutionary negation of feudalism. Instead capitalism emerged within the feudal order and flowered in the cultural soil of a Western civilization already thoroughly infused with racialism.” In this way, we cannot disentangle or decouple capitalism from the context of racial hierarchy, which is why the Marxist analysis presented by Bowles & Gintis (1976) is curiously absent of much analysis of the role of race. Kelley (2017) continues:

Capitalism and racism, in other words, did not break from the old order but rather evolved from it to produce a modern world system of “racial capitalism” dependent on slavery, violence, imperialism, and genocide. Capitalism was “racial” not because of some conspiracy to divide workers or justify slavery and dispossession, but because racialism had already permeated Western feudal society.

This assertion shows the centrality of racial hierarchy to capitalism and that in fact race cannot be deduced to class in the Marxist sense. As the racial hierarchy over-arches the capitalist mode of production, and also implies that Marxist approaches, social reproduction theory, and group conflict approaches can be revised to incorporate this historical reality. Importantly, as Robinson (2000) shows racial hierarchies, like other relations of capitalism, are persistent but also reconfigure over time,

especially as backlash sometimes reifies such hierarchies.⁹ This approach grounds capitalism today in the history of its development and relationship to slavery and the longer arch of group-difference based exploitation. Similarly, Darity & Mullen (2020, p. 68) describe not just the historical, but ongoing relationship of today's economy to racialization and slavery:

Suffice it to say that in the United States, slave ownership was a white affair and enslavement was a Black affair, and the benefits and damages were distributed accordingly. The sale and forced labor of Black bodies drove the commerce of the United States from the earliest days of the nation and made possible the world we inhabit today.

In *From Here to Equality*, Darity & Mullen (2020) explicitly connect ongoing educational disparities, police violence, and incarceration to show the continued undervaluation of Black individuals and communities, which works to perpetuate not just inequality, but also the system of racial capitalism. Revising the analysis then of (Bowles & Gintis 1976, Folbre 2012), this implies that racial capitalism ultimately determines inequality, and schooling neither adds or subtracts inequality but does to justify and legitimize the inequalities determined by racial capitalism. This understanding then helps to explain otherwise confounding economic facts, such as the fact that educational attainment across all groups has increased, racial gaps in earning persist and the racial wealth gap has even widened (US Census Bureau n.d., Weller & Hanks 2018, Jones & Schmitt 2014). These inequalities persist because they are embedded in the fundamental structure of racial capitalism.

⁹See Woodson (1933) on the role of education in maintaining and intensifying anti-Black racism after Reconstruction. See further Roediger (2007) and Ignatiev (2009) on the reconfigurations of racial hierarchy.

1.4.1 Dual Logics: Capital Accumulation and Disposability

A framework grounded in racial capitalism provides not just a deeper understanding of capitalism's relationship to slavery, but also to how this legacy shapes ongoing inequalities. To understand the dynamics of racial capitalism, it necessary to outline its internal logics, or driving motivations. While class-centered notions of capitalism focus on the logic of capital accumulation- in other words, the ongoing drive for profits through the exploitation of labor- an analysis of racial capitalism must incorporate the particular logic associated with racialization and anti-Black racism specifically. Understanding the dual logics of racial capitalism helps to show and understand the contradictory, complex, and at times irrational ways racial capitalism operates.¹⁰

Wang (2018)'s *Carceral Capitalism* synthesizes this view, drawing both on the Marxist notion of the capital accumulation logic and the specific logic of racialization: *disposability*. Identifying these dual logics of racial capitalism puts into context why an economy in crisis may dedicate such extensive resources to mass incarceration and the carceral state broadly, as has been in the case since the 1980s (Gilmore 2007). Wang (2018) asserts that this form of carceral racial capitalism, and specifically Black racialization, relies on both a logic of *exploitability* (i.e. the logic of capital accumulation via exploitation) in tandem with a logic of *disposability*. The logic of disposability can also be seen in Gilmore (2007, p. 247)'s definition of racism: "Racism is the state-sanctioned and/or extralegal production and exploitation of

¹⁰Du Bois (2007) describes the "wages of whiteness" as often economically irrational, and uses this concept to show how working class white make a cross-class alliance to maintain a racial hierarchy, even when to an economic detriment.

group-differentiated vulnerability to premature death.” Acknowledging the role of disposability, which also encompasses (premature) death and gratuitous violence, brings the analysis in conversation with important insights from Afropessimism, as synthesized by Wang (2018). This synthesis builds on Wilderson III et al. (2017)’s definition of the slavery and thus Blackness as social death constituted of gratuitous violence, alienation, and what he terms “general dishonor” in the continuum of slavery-subjugation that has persisted with racialization under capitalism.

This conception of a carceral, racial capitalism with a dual logic of exploitability and disposability provides an important insight for understanding the development of the so-called “school-to-prison pipeline”, and why so many schools and resources are dedicated to creating punitive, exclusionary, and criminalizing school environments. The process through which schools embody these two logics is what both Woods et al. (2017) and Sojoyner (2013, 2016) call *enclosure*.

1.4.2 Economics of Enclosure

The term enclosure is most closely associated with Marx’s description of the development of capitalism in Europe: the enclosure, or privatization, of the commons leaves a class of feudal serfs without access to means of subsistence and thus coerces them into the laboring working class of capitalism in exchange for wages. This process of enclosing the commons is referred to as “original accumulation”. Harvey (2005, p. 144) explains that while Marx may have described a particular historical instance, this form of accumulation is in fact ongoing as capitalism augments its resources in the face of crises:

A general reevaluation of the continuous role and persistence of the predatory practices of ‘primitive’ or ‘original’ accumulation within the long historical geography of capital accumulation is, therefore, very much in order, as several commentators have recently observed. Since it seems peculiar to call an ongoing process ‘primitive’ or ‘original’ I shall, in what follows, substitute these terms by the concept of ‘accumulation by dispossession’.

Accumulation by dispossession can also be described as an ongoing form of *enclosure*. The enclosure framework provides the scaffolding for an analysis describing how the institutions of racial capitalism- such as school and the carceral state, but also financial institutions, housing policy, and so on- work to continuously dispossess marginalized populations, limit access to wealth and economic security, and create economic exclusion. Woods et al. (2017, p. xxvi) describes these as “asset stripping enclosure institutions” as a key feature of racial capitalist development, in the forward by Jordan T. Camp and Laura Pulido to the posthumously published *Development Drowned and Reborn*:

He [Woods] powerfully shows how neoliberals have engaged in the stripping away of social and economic rights by constructing “asset stripping enclosure institutions”. These enclosure institutions have led to historic levels of racial inequality, structural unemployment, and poverty, and have made New Orleans the most carceral city in the state, with the highest rates of incarceration in the country and the world. According to Woods, the formation of this carceral apparatus was a key feature of a neoliberal enclosure movement, which maintained a “system of militarized regulation, physical boundaries, and social, political, and economic traps.” This form of what he called “trap economics” extracts wealth from the racially subordinated poor and working class by privatizing social goods formerly held in common, such as public schools, hospitals, housing, transit, and parks, and increasingly expenditures for policing and prisons.

Enclosures show through what specific processes the inequality innate to racial capitalism is maintained; through privatization, land grabs, incarceration, the over-policing of nominally public spaces, and other examples of such “economic traps”. So how does enclosure help us to understanding the current nexus between public schools and the carceral state?

1.4.3 Education, the Carceral State, and Enclosure

As stated earlier, the STPP framework provides a very narrow lens for understanding the broader issue of how the carceral state intersects with public schools in the United States, and how this intersection works to uphold heteropatriarchal racial capitalism. The enclosure model is presented by Sojoyner (2013, 242) drawing on the work of Clyde Woods, and creates a broader lens for analysis of the STPP, but also a framework for interpreting its manifestations:

Further, the STPP framework does not provide room to analyze the manner in which the technologies of control and enclosure models utilized within the current prison regime were foregrounded by processes set into motion over 50 years ago in the realm of public education. The term enclosure is derived from the work of Clyde Woods (1998) who argues that enclosures are processes enacted by regional blocs during particular historic moments in an attempt to “gain control over resources and over the ideological and distributive institutions governing their allocation” (p.26). Enacted through various strategies such as forced removal, benign neglect, abandonment, and incapacitation, the goal of enclosures is the blur the social vision of Black communities. That is, rather than a school to prison pipeline, the structure of public education is just as and maybe even more so culpable in the enclosure of Black freedom, which in turn has informed the development of prisons.

Sojoyner (2013) goes on to describe how public education is rooted in anti-Black racism, challenging the STPP framework to say “Thus, strategies to address the

STPP that focus on shifting behaviors serve to legitimate the idea that disciplining student behavior is necessary, as long as the mechanisms do not push students out of school or entail arrests. While the STPP framework may challenge the basic tenet that the meting out of discipline is disproportional, it fails to challenge the ethos of anti-Blackness as foundation to the formation and enactment of school discipline.” This is an important intervention because the enclosure framework encapsulates that the dynamics of the STPP cannot be reduced to changing school policies or even individual behaviors, since the broader dynamics of enclosure will continue to uphold the structure of racial capitalism.

The enclosure framework also helps us to expose how the STPP embodies the dual logics of racial capitalism, by creating a justification for economic inequality through unequal education, but also through a logic of disposability that relies on *exclusionary* discipline, incarceration, and even gratuitous violence as punishment.¹¹ Further, Sojoyner (2016) makes the case that this reframing also shows how “public education has been at the forefront of ushering in the prison regime as a mechanism of ideological enclosure”, specifically noting the role that the carceral state in schools has played in suppressing radical youth movements, especially given schools and universities as historically important sites of organizing against racial capitalism.

¹¹In 19 states, corporal punishment remains legal and deeply disproportionately is targeted towards Black students and students with disabilities. Further, there have been several incidents of documented assault of students by law enforcement in schools: https://ocrdata.ed.gov/StateNationalEstimations/Estimations_2015_16.

The enclosure framework can enrich analyses of issues related to the nexus of the carceral state and public education by instead framing issues of inequality, disparities, and problems in and about schools as manifestations of educational enclosures that uphold the power structures of racism and other axes. This framing then moves away from a human capital framework that may, intentionally or not, inadvertently frame issues of discipline disparities or arrest in school as issues of individual or school deficits, dysfunction, or failure. Enclosures show us that issues of discipline, criminalization, racial profiling, gatekeeping, tracking, and achievement debts- embodied in policies and even well intended actions by policing in schools, teachers, counselors staff, and so on- are instead manifestations and mechanisms of educational enclosures that work to uphold the structure of heteropatriarchal racial capitalism, and assist in creating, legitimizing, and normalizing logics of exploitation and disposability.

1.5 Conclusion: Reconceptualizing The Political Economy Of Schools And The Carceral State Towards Transformation

The enclosure framework is an important intervention in understanding the economics of the carceral state and public education. Racial capitalist development, from Reconstruction to the Civil Rights Era to the age of mass incarceration under neoliberalism, have shaped the education system as a central part of the carceral state, and therefore a central feature for maintaining the racial, class, gender, and other hierarchies of a racial capitalist economic system. Schools oriented towards discipline and criminalization, the biases of teachers and staff, the gatekeeping of

educational resources, exclusionary policies and practices, ongoing discrimination and unequal access to housing, jobs, and finance as an intentional policy choice, all compound to create and uphold the logics of racial capitalism. Because policies, practices, and even individual choices are constrained by these power structures, even well-intentioned reforms and individuals may be limited.

Analyzing the STPP through this lens and introducing the framework of enclosures allows us to answer perplexing questions about why such a trend would develop and persist, and what internal logics drive the development of carceral schools, as well as the carceral state and racial capitalism broadly. The interdisciplinary (or antidisiplinary in the case of Meiners (2007)) work of Woods et al. (2017), Sojoyner (2013, 2016), Meiners (2007, 2016) opens up the space for a broader thinking about the school-to-prison pipeline, its origins, and the potential solutions. Meiners (2007, p. 3) cites the work of (Anyon 2005) on how a broader conception of the STPP widens the possibilities for what counts as educational policy:

If, as I am suggesting, the macro-economy deeply affects the quality of urban education, then perhaps we should rethinking what “counts” as educational policy. Rules and regulations regarding teaching, curriculum, and assessment certainly count; but perhaps policies that maintain high levels of urban poverty and segregation should be part of the educational policy panoply as well- for those have consequences for urban education at least as profound as curriculum and pedagogy.

This lens widens the scope of solutions to see that economic issues typically considered outside of the realm of education are also educational policy issues. This insight then guides the conversation to not just trying to reduce disparities or reliance on discipline, but instead to a broader policy and political economic agenda of eroding and dismantling the carceral state and racial capitalism. Further, this framework

also allows us to understand the causality issues around the school-to-prison pipeline as rooted in the larger dynamics of structural racism and economic inequality, and the intentional barriers and policy choices that have maintained this system.

Related to this idea of broadening education policy to also encompass economic policy, in *From Here to Equality: Reparations for Black Americans in the Twenty-First Century*, Darity & Mullen (2020) lay out a vision for repairing the harms of slavery and ongoing anti-Black racism through the principles of acknowledgement, redress, and closure. Similarly, an abolitionist approach to schooling focuses on removing punitive punishment systems from there, as well as creating systems for mediating conflict and repairing harm without reliance on violence or confinement. From this view, the policy issues at hand with the STPP are similar to the calls for reparations, the dismantling of structural racism, and the abolition of the carceral state. Within schools this looks like curriculum and teachers reflecting students and their communities, democratic participation in schools by students and communities, and the implementation of alternatives to punishment such as transformative justice programs. As we know from the current demands of students in the Black Lives Matter Movement, this also involves decarcerating schools to remove the presence of the criminal justice system in learning spaces, and giving students a voice in their schools, even their school budgets. Outside of the school, this vision includes a much broader array of economic approaches to erode racial capitalism and the carceral state: reparations, baby bonds, increased worker power, participatory budgeting, and other practical policies would all effectively work to begin transforming schools as

spaces of learning and care, and the economy and its institutions, including schooling, towards more liberatory possibilities.

Figure 1.1: Female School Discipline Disparities Civil Rights Data Collection 2015-16

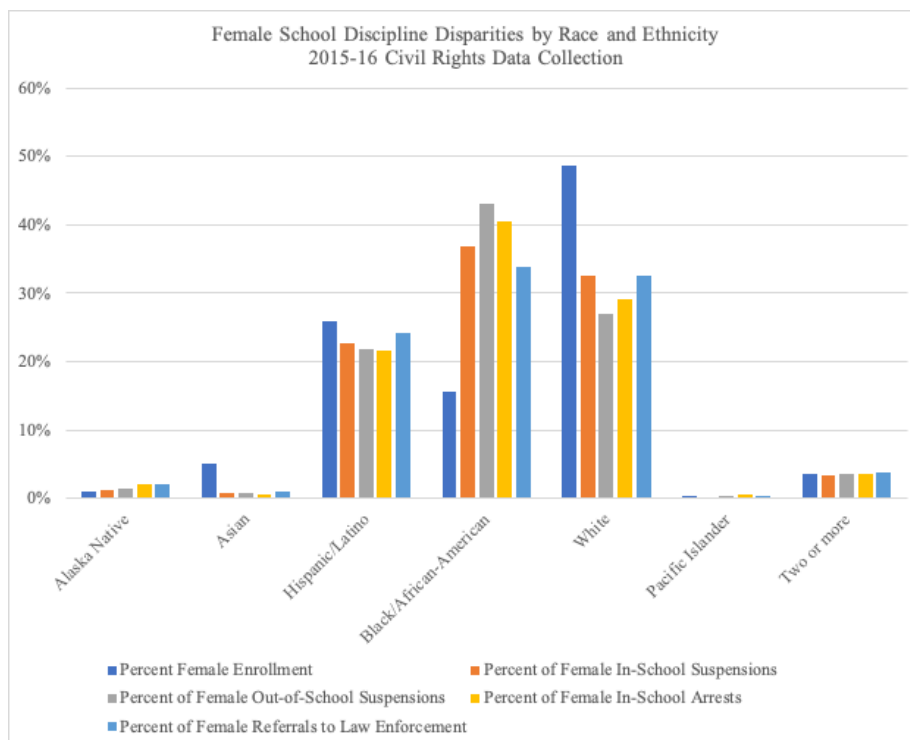


Table 1.1: Change in State and Local PK-12 Expenditures vs. State and Local Corrections Expenditures from 1979-80 to 2012-13

PK-12 Expenditures			State and Local Corrections Expenditures		
1979-80	2012-13	Change	1979-80	2012-13	Change
\$258,329,682,166	\$534,101,927,374	107%	\$16,619,181,455	\$70,547,349,000	324%

*constant 2013 dollars

Source: <https://www2.ed.gov/rschstat/eval/other/expenditures-corrections-education/brief.pdf>

Figure 1.2: Male School Discipline Disparities Civil Rights Data Collection 2015-16

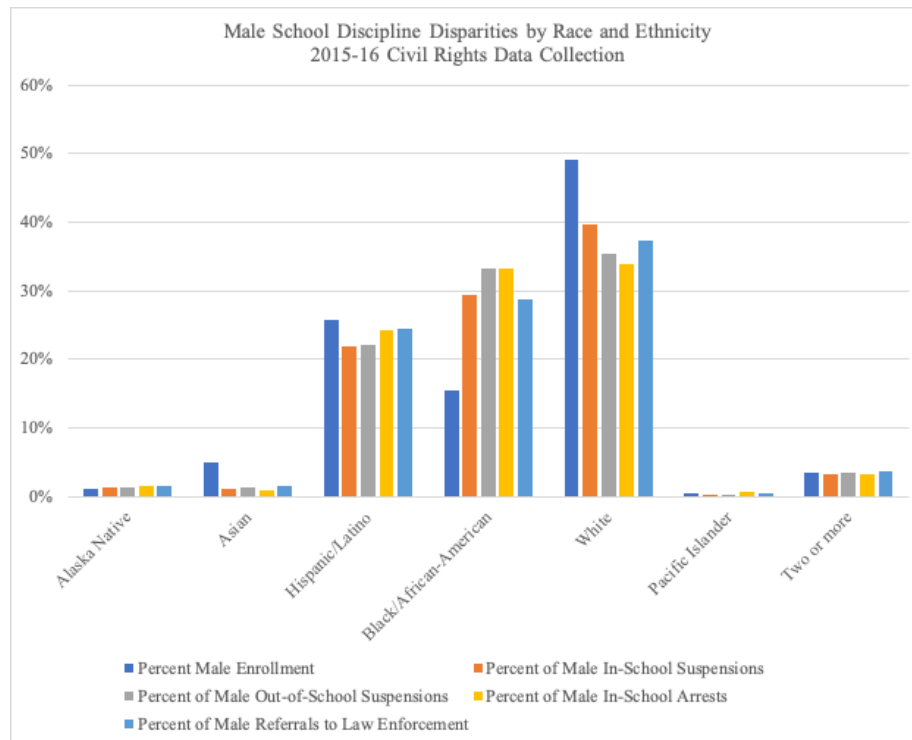


Table 1.2: School Support Staff FTE Equivalents, Civil Rights Data Collection 2015-16

	Sworn LEOs	Sec. Guards	Counselors	Nurses	Psych.	Social Workers
Number	10,062	18,753	55,712	16,446	10,834	9,116
Schools	8,589	5,368	20,369	14,541	10,062	6,770
Pct. of Schools	33.5	20.9	79.4	56.7	39.2	26.4
	Total LEO/Sec.	28,815				

Source: Civil Rights Data Collection 2015-16 FTE Support Staffing, High Schools

CHAPTER 2

CARCERAL SCHOOLS AND COLLEGE EXPECTATIONS: EVIDENCE FROM THE NATIONAL CRIME VICTIMIZATION SURVEY SCHOOL CRIME SUPPLEMENT

“When children attend schools that place a greater value on discipline and security than on knowledge and intellectual development, they are attending prep schools for prison.”

*Angela Y. Davis in **Are Prisons Obsolete?***

2.1 Introduction

School safety and security is a recurring debate nationally, especially following high profile incidents of violence in schools, but limited attention is given to the consequences of these measures. This paper examines how school environments with carceral forms of security- such as metal detectors, locker checks, police or security guards, and so on- impacts students’ expectations of going to or graduating from college, and how these measures disparately impact students by race, ethnicity, and gender. Understanding how these forms of school security may negatively impact students shows an important “cost” of these measures, and shows how school security associated with the “school-to-prison pipeline” (STPP) which disciplines, criminal-

izes, and pushes students out of school, also encloses educational opportunities for students, especially those already marginalized in school and in the economy.

The implementation of security measures such as metal detectors, police in schools, and other tactics are often at the center of school safety debates. At the same time, issues of school security intersect with the STPP dynamic in schools, which is a metaphor encompassing how schools with high security, strict discipline policies, and interaction with the criminal justice system tracks students into incarceration, disproportionately impacting Black, Hispanic or Latinx, Native or Indigenous, and other marginalized students (Heitzeg 2009). Alongside discipline, one element of the STPP metaphor is the increasing use of physical security in schools, such as metal detectors, security guards or police, locker checks and drug sweeps, surveillance equipment, and so on. Sometimes these measures are adopted in an effort to increase school safety following high profile incidents of school violence, but their history is also crucially linked to the development of the carceral state and mass incarceration (Kupchik & Bracey 2010, Sojoyner 2013, 2016). Many of the most visible forms of these measures- like metal detectors- are more often to be found in urban schools with majority non-white and lower income students, with no clear relationship to preventing acts of violence in school (National Center for Education Statistics 2017b, Hankin et al. 2011b).

In examining the impacts of school security, research shows the negative consequences that security measures, such as metal detectors, have on students, their perceptions of safety and fairness, and their educational outcomes (Perumean-Chaney & Sutton 2013, DeAngelis et al. 2011, Gastic 2011, Hankin et al. 2011b, Kupchik &

Ellis 2008, Tanner-Smith & Fisher 2016). Other studies have also shown differential impacts of policing in and around schools on the likelihood of student discipline, criminalization, and educational outcomes (Owens 2017, Weisburst 2019). Considering these negative impacts that security and policing may have on various student outcomes, this research calls into question the impacts of school security on educational outcomes. For that reason I ask in this paper, how do school security measures impact students' expectations of going to college in their future? In this study, I do not posit that higher education is always the desired outcome or that going to college ameliorates the issues of the STPP. Though rising costs and mounting debt burdens calls into question the economic mobility associated with college-going, it remains true that a college credential continues to offer an important buffer in today's labor market and economy.

I refer to schools with physical security measures and policies such as metal detectors, security or police, locker checks, and surveillance as *carceral schools*. This term draws on the work of Shedd (2015) who observes public schools as part of the *carceral continuum*- the term used by Foucault (1977), where students encounter policing, surveillance, punitive punishment, and criminalization in and on the way to school, creating a "school discipline superstructure". The term *carceral schools* specifically focuses on how this creates both a physical and social environment focused on punishment and criminalization. Framing schools as part of the *carceral continuum*, or as a site of the *carceral state* of policing and criminalization, rather than narrowly through the pipeline metaphor is an important intervention that shows not only how schools are integral sites of the *carceral state*, but also how this nexus has broad im-

pacts on students and communities. This paper will extend existing research on the impacts of school security to ask, how do carceral school environments with these security measures impact student expectations of their future educational attainment? In this analysis, I highlight the impacts that carceral school environments have on student expectations of college-going, and how these impact differ by race, ethnicity, and gender.

Using a conceptual framework drawn from across the social sciences and data from the National Crime Victimization Survey: School Crime Supplement, I find that visible and intrusive school security measures- especially metal detectors- are associated with a negative impact on student expectations of college-going, and that these impacts are often more profound for Black and Hispanic or Latinx students. These results differ by race and gender, showing the differential ways that these measures impact students. I frame this descriptive result as indicating how carceral school environments *enclose* educational opportunities from students in racialized and gendered ways that perpetuate unequal access to education and maintain economic inequality.

2.2 Background On School Security And Its Impacts

The school-to-prison pipeline (STPP) trend encompasses a number of practices in public schools leading to interaction with the criminal justice system, which disproportionately impacts Black, Hispanic or Latino, Indigenous or Native, and other marginalized students. These practices include: increased use and severity of school

discipline such as out-of-school suspension and expulsions, the adoption of zero-tolerance policies related to disciplinary violations, and the increasing prevalence of security measures in school environments (Heitzeg 2009).

Over the past decades, the use and distribution of school security measures changed, shifting towards the increased use of surveillance, metal detectors, security guards, police in schools, and so on. Many of these policies and practices were implemented through the “law and order” politics of the War on Drugs in the 1980s, later codified by the Gun Free Schools Act of 1994 as part of larger crime reforms, and then reified in reaction to particular high profile acts of school violence such as the 1999 Columbine massacre (Heitzeg 2009). Kupchik & Bracey (2010) note that zero tolerance policies largely emerged out of the War on Drugs, and were adopted gradually beginning in the 1980s. Some measures such as police presence in schools as school resource officers (SRO’s) began even earlier in the 1950s and 1960s. Sojoyner (2013) shows that police presence in schools and in curriculum began during the post-Civil Rights Era, as part of a push back against Black youth organizing and to legitimize the state’s “law and order” approach. A 1978 report “Violent Schools-Safe Schools: The Safe School Study Report to the Congress Volume I” prepared by the National Institute of Education illustrates the relatively limited focus on school security in previous decades (National Institute of Education 1978). The report shows just 5 percent of urban schools having police within the school, with even lower percentages in small cities, suburban districts, and rural schools in 1970. In terms of security guards, just 35 percent of urban schools employed any security in 1970, compared with over 50 percent of all schools in 2015-16. (National Institute

of Education 1978, National Center for Education Statistics 2017a). Data show a steady growth in school security staffing overtime, including police officers and paid security staffing in schools (National Center for Education Statistics 2017c). The report excludes discussion of other forms of school security beyond police officers and security guards, however it does link desegregation orders to "school violence", which provides evidence for how school security measures have a complex, racialized history.

In regards to the Gun Free Schools Act of 1994, Skiba & Knesting (2001) show that this legislation cemented concerns about school violence and safety at the national level, creating an impetus to intensify both zero tolerance discipline policies and school security measures. As a part of the 1994 Violent Crime and Law Enforcement Act, which intensified mass incarceration and policing, this legislation focused on firearms in schools, however it was quickly extended to all weapons, drugs, alcohol, and behaviors, thus broadly impacting school security as well as disciplinary practices, and allowing schools to criminalize students for violations. Through this broader focus, the Gun Free Schools Act expanded not only school discipline but the implementation of physical security measures as well.

The growth of school security mirrors the logic of broken windows policing (Shedd 2015). The broken windows theory of policing assumes that policing methods should target environments with visible signs of crime, such as broken windows and vandalism, as a means of preventing and minimizing criminal acts (Wilson & Kelling 1989). The theory however was widely used as the basis for surveillance, stop-and-frisk, and other highly problematic and aggressive tactics that effectively over-policed

misdemeanors. Later, researchers found that while initially estimates of broken windows tactics showed massive reductions in violent crime, these estimates were largely biased and the trend occurred even outside of areas that had implemented these aggressive policing policies (Harcourt 2001). Instead, broken windows policing created *carceral* neighborhood environments, and disproportionately targeted Black, Hispanic or Latinx, Indigenous or Native, and poor populations. School security and policing can be viewed as a form of broken windows policing, in which schools police and surveil students leading to racial profiling, increased discipline and criminalization. This rise in policing and surveillance in schools tracts with policing imprisonment, surveillance, and criminalization associated with the rise of the carceral state. Introducing punitive and carceral security measures and disciplinary policies to schools conflates criminalization with actual safety, which is exemplified by the evidence that these measures actually negatively impact students sense of safety at school (Gastic 2011, Perumean-Chaney & Sutton 2013).

Crawley & Hirschfield (2018) trace the term “school-to-prison pipeline” as a metaphor encompassing the disciplinary practices and policies that increase students’ likelihood of interaction with the criminal justice system. These practices are often compounded by other factors such as high stakes testing, criminal justice policies, or other policies and laws. But, the metaphor is significantly more nuanced than a clear, mechanistic pipeline between school practices and policies and incarceration. As they explain, the STPP metaphor can also include school environment and practices that lead to criminalization, such as physical security measures, metal detectors, and surveillance. The pipeline itself is embedded in a complex web of

policies, institutions, and structural factors that in part influence the dynamic of pushing students out of schools, away from economic access, and onto the criminal justice track. Crawley & Hirschfield (2018) present an alternative, iterative model of the STPP as multi-directional, showing how school disciplinary practices and environments interact with poverty and structural inequality, the criminal justice system, bleak labor markets, and a heightened probability of future incarceration. Further, Sojoyner (2013, 2016) shows how in fact schools are an integral part of the carceral state- that is the state apparatuses such as policing, prisons, and the criminal justice system to which a large portion of public resources are dedicated to upholding, and which works to aggressively police, criminalize and incarcerate individuals, working to uphold and legitimize the inequalities of a racial capitalist system. Similarly, Shedd (2015) approaches the issue with a broader framework of the *carceral continuum* building on the notion of Foucault (1977), and shows how schools with heavy reliance on school security serve as part of the carceral state. This presence of school as part of the carceral continuum that not only results in mass incarceration, but also limits opportunity and economic mobility, and reinforces the existing racial hierarchy. Using this broader notion of the role of schools in the carceral continuum, carceral school environments are an integral component of the larger carceral state, and have both direct negative consequences for students in terms of pushout and criminalization, but also broader impacts in terms of how students perceive, react, and are treated in carceral school environments, compounding the economic impacts of unequal schooling.

2.2.1 The Distribution of School Security Measures

According to the National Center for Education Statistics (NCES), controlled access to buildings and locked doors has become increasingly common over past decades, with nearly all schools requiring locked buildings, visitor check-ins, and having a “closed campus”, as shown in Table 2.1. Similarly, the use of surveillance cameras also increased since school year 1999-2000, growing from use in 19.4 percent of public schools to 80.6 percent in the 2015-16 academic year (National Center for Education Statistics 2017a). Table 2.1 also shows that while random metal detector checks have declined overall, a higher proportion of schools now require daily metal detectors and use random dog sniffs for drugs. Overall, most measures have increased in prevalence since 1999-2000, with the exception of required clear book bags.

While some of these measures such as locked doors and surveillance have become commonplace, others measures are less common across all schools, but more prevalent in urban, high poverty, and majority non-white schools. For example, according to Table 2.2, in 2015-16 most schools in all areas had controlled access to school buildings, and large portion have controlled access to school grounds as well.

Table 2.1: School Security Measures Over Time

Percentage of Public Schools with School Safety and Security Measures	1999-2000	2015-16
<hr/>		
Controlled access during school hours		
Buildings (e.g., locked or monitored doors)	74.6	94.1
Grounds (e.g., locked or monitored gates)	33.7	49.9
Visitors required to sign or check in	96.6	93.5
Classrooms equipped with locks so that doors can be locked from inside	—	66.7
Student dress, IDs, and school supplies		
Required students to wear uniforms	11.8	21.5
Enforced a strict dress code	47.4	53.1
Required students to wear badges or picture IDs	3.9	7.0
Required faculty and staff to wear badges or picture IDs	25.4	67.9
Required clear book bags or banned book bags on school grounds	5.9	3.9
Provided school lockers to students	46.5	50.4
Metal detectors, dogs, and sweeps		
Random metal detector checks on students	7.2	4.5
Students required to pass through metal detectors daily	0.9	1.8
Random dog sniffs to check for drugs	20.6	24.6
Random sweeps for contraband (e.g., drugs or weapons)	11.8	11.9
Communication systems and technology		
Provided telephones in most classrooms	44.6	79.3
Provided electronic notification system for school wide emergency	—	73.0
Provided structured anonymous threat reporting system	—	43.9
Had silent alarms directly connected to law enforcement	—	27.1
Used security cameras to monitor the school	19.4	80.6
Provided two-way radios to any staff	—	73.3
Limited access to social networking sites from school computers	—	89.1
Prohibited use of cell phones and text messaging devices	—	65.8

Source: NCES Digest of Education Statistics 2017, Table 233.50.

Table 2.2: Percentage of Public Schools with Various Safety and Security Measures

Percentage of public schools with various safety and security measures, by selected school characteristics: 2015-16

	Controlled access to school buildings	Controlled access to school grounds	Student or picture IDs required	Random metal detector checks	Daily metal detector checks	Random dog sniffs for drugs	Random sweeps for contraband
Locale							
City	95.69	60.23	11.69	8.83	5.57	14.92	10.78
Suburban	95.49	51.69	7.30	3.76	0.37	19.48	8.18
Town	92.76	45.97	4.56	3.13	‡	31.43	14.93
Rural	91.40	39.14	2.95	1.53	0.56	37.13	16.02
Percent combined enrollment of Black, Hispanic, Asian, Pacific Islander, and American Indian/Alaska Native students, and students of two or more races							
Less than 5 percent	97.32	35.03	‡	‡	‡	37.04	22.62
5 percent to less than 20 percent	93.20	34.50	4.08	1.10	‡	32.57	11.42
20 percent to less than 50 percent	93.26	45.39	4.75	2.67	‡	23.59	9.44
50 percent or more	94.65	64.28	11.05	8.28	4.09	18.40	12.07
Percent of students eligible for free or reduced-price lunch							
0 to 25 percent	94.26	43.56	7.16	1.14	‡	18.09	5.48
26 to 50 percent	93.52	40.64	4.05	1.57	‡	30.35	12.04
51 to 75 percent	92.90	50.84	8.52	3.84	0.95	30.30	14.10
76 to 100 percent	95.71	62.02	8.24	9.95	5.42	16.90	13.35

Source: NCES Digest of Education Statistics 2017, Table 233.60.

Some measures though, including metal detector checks and required identification badges, were more likely in city schools with higher proportions of non-white students and high-poverty enrollment (as measured by free or reduced price lunch eligibility). While over 5 percent of city school have daily metal detector checks, less than 1 percent of other schools do. Random metal detector checks are similarly more common in city schools, compared with their suburban, town, and rural counterparts, and are more common in majority non-white and higher-poverty schools (National Center for Education Statistics 2017b).

2.2.2 The Impact of School Security on Students

Given the expanding presence of policing, security equipment, and practices across schools in the U.S. and the connection between schools and the carceral state, it is important to understand how these measures impact students and the dynamics within schools. A large literature already shows the connections between school discipline, disciplinary policies, racial and gender disparities, school pushout, and incarceration (Ferguson 2000, Skiba & Knesting 2001, Shollenberger 2013, Morris 2015, Mittleman 2018, Owens & McLanahan 2020). It is critical to also understand how particular aspects of the school environment contribute to or even compound these dynamics to create schools that embodying the carceral state.

Using data on Federal Community Oriented Policing Office grants to schools for hiring school resource officers, Owens (2017) shows that police in schools are associated with more arrests in school, mostly impacting students under age 15. Similarly, Weisburst (2019) shows that police in schools are associated with high rates of school

discipline, and decreased college enrollment rates. Sorensen, Shen & Bushway (2020) show that school resource officers are associated with higher rates of out-of-school suspensions, expulsions, and referrals to law enforcement. In an interview study, (Fisher et al. 2020) show how school resource officers primarily perceive students as threats in schools with a larger proportion of Black students, as opposed to focusing on outside threats in schools with larger proportionate of white students.

The effectiveness of security measures like metal detectors is debated. While some studies show metal detectors effective at deterring students from carrying a weapon at school, others show a negative impact on students' perceptions of their safety at school (Hankin et al. 2011b). Gastic (2011) shows that metal detectors are negatively correlated with a students' sense of safety school, and the effect is even more profound for students attending urban schools, which are more likely to be majority non-white and high poverty. Another study (Perumean-Chaney & Sutton 2013) shows that school security measures have differing impacts on different student populations. While there is a general decrease in student reports of feeling safe when visible school security measures are implemented, white male students with high GPAs were more likely to report feeling safe. Those students though who attended schools with more "disorder problems" were less likely to report feeling safe given visible security measures. Another study shows that school security, like metal detectors, negatively impact student perceptions of fairness at school, especially for African American students (Kupchik & Ellis 2008). Tanner-Smith & Fisher (2016) examine *visible* school security measures, but find little evidence of a negative impact on academic performance, attendance, or post-secondary aspirations, with the exception

of a small subset of highly securitized schools serving students of lower socioeconomic status. These studies illustrate how the impacts of school security – specifically metal detectors – have racialized effects that reinforce inequality.

Shedd (2015)'s book *Unequal City* documents these unequal impacts. In regards to how students at an urban school, majority non-white school view school security, Shedd (2015, 95) writes of her research with Chicago public schools students:

The students are willing to acknowledge some moderate level of effectiveness of the security guards, but they scoff at the metal detectors. ... Not all of the school's doors have metal detectors, and Gabrielle (who identifies as white) and Jane tell me that they believe the metal detectors are "just there as a front"; they suspect that the machines may not even function. Gabrielle sees them as using up financial resources that could be allocated to repairing the school's water fountains, buying new books, and handling the rodent problem.

Shedd (2015) contrasts this to other schools in Chicago, which are more white and middle class, in how their students associate metal detectors with feeling more safe. She describes how in these two different types of schools, the universal carceral apparatus of metal detectors, guards, and so on then is either *activated* or *not activated*, stratified along the lines of race, class, and gender. Metal detectors may seem passive to some student populations, but to students at majority non-white, urban, and higher poverty schools, these measures can feel intrusive, punitive, racially targeted, and even wasteful. Some argue that these school security measures – metal detectors, surveillance, police and security guards, and so on – create a prison-like school environment. A carceral school environment may socialize and prepare students for prison, rather than for higher education or the labor market. Hirschfield (2008) makes the argument that school security and discipline, coupled with the broader

structural context of a troubled domestic economy, mass unemployment, and mass incarceration has created a public education system that promotes punishment and exclusion and socializes students – particularly students Black and Hispanic or Latinx students – for prison and the “criminal justice track”. Others argue that it is less of a preparation pipeline, but rather a key site of the carceral state that works to maintain and normalize racial and gender hierarchy and economic inequality (Meiners 2007, Sojoyner 2013, 2016).

2.3 What Makes A Carceral School?

To understand the school environment changes associated with the STPP, I use the notion of carceral schools drawing on Shedd (2015)’s insight of schools as part of the carceral continuum. In *Homeroom Security*, Kupchik & Bracey (2010) define what they call the new regime of school discipline exemplified by the presence of police in school, increase use and severity of discipline measures, and use of school security equipment. They explain that police presence in schools is not a new phenomenon; school resource officer programs (SROs) came about as early as the 1950s, though they did not become common until the 1990s. However, this new regime of school discipline is marked by increasingly prevalent use of zero-tolerance policies, increasing police presence in schools, as well as the use of technological surveillance such as metal detectors and surveillance cameras, which sociologist Loïc Wacquant notes as embodying the physical characteristics of a prison (Wacquant 2000).

For my research, I define a carceral school as a public school that embodies aspects of the universal carceral apparatus: having metal detectors, police and security staff,

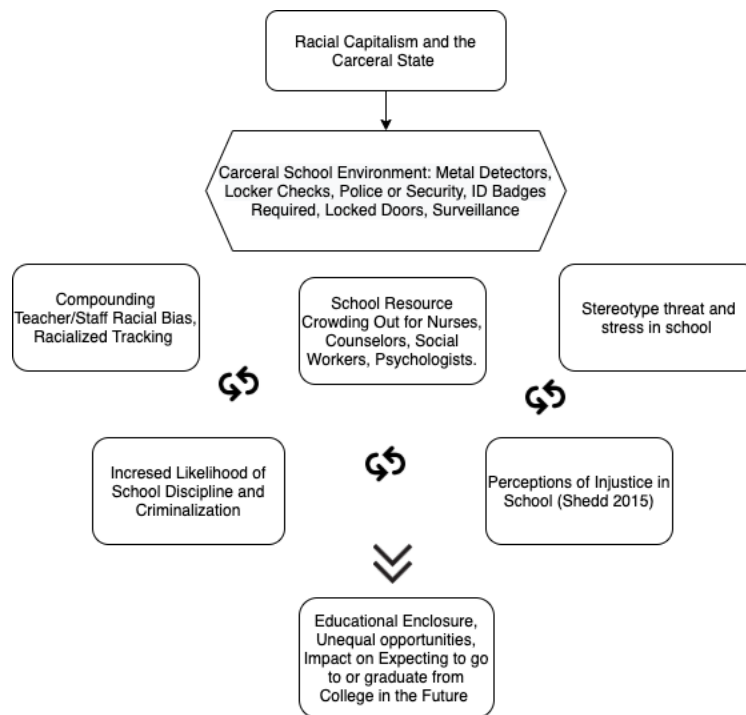
locker and contraband checks, electronic surveillance, and other security measures. I will distinguish between those security measures that are commonplace, such as cameras and locked doors, and those that are more visible and intrusive, such as metal detectors and locker checks. Using the following conceptual framework to interpret my results, I will test an econometric model of how carceral school security measures impact student expectations of attending and graduating from college in the future.

2.3.1 Conceptual Framework: Carceral School Environments and Student Outcomes

The rise of the carceral state, mass incarceration, and issues of the criminal justice system have a complex history intertwined the history of racism, gender oppression, and developments in capitalism. The context of growing inequality, aggressive policing, and mass incarceration helps us to understand the root causes of schools developing as carceral sites. Given that, how do these environments then impact students and work to potentially limit opportunity?

In Figure 2.1, I show the complex and iterative interactions that may occur within schools embodying aspects of the carceral apparatus through police or security, metal detectors, locker checks, required identification badges, locked doors, surveillance, and other forms of security. This environment then interacts with related issues within schools: teacher and staff racial and gender bias, crowding out resources for care and education including (which could also include instruction time), and creating a stressful environment in school especially due to racial profiling, discipline, and criminalization.

Figure 2.1: Conceptual Framework of How Carceral Schools Impact Student Expectations of Going to College



Empirical studies show, in various contexts, the racial and gender biases of teachers and staff, including guidance counselors, in school. Research shows the racial and gender bias of teachers, with studies finding racially biased perceptions of students' behaviors, absences, and aptitudes. (Francis 2012, 2013, Campbell 2012, Condrón 2007, Downey & Pribesh 2004). Guidance counselors, an important gatekeeper to college-going, have also been shown to perpetuate racial and gender bias, with studies showing racial bias in counselor recommendations including those for advanced math coursework (Francis et al. 2019, Linnehan et al. 2011). Related, racialized tracking in schools limits students' opportunities for advanced coursework and other resources, which again may be compounded by a school environment presuming its students as a threat (Diette 2012). For teachers, counselors, and staff is possible that these biases could be intensified by an environment that is built towards discipline and criminalization.

As stated by Shedd (2015)'s observations, some students suspect that metal detectors are an inappropriate use of school resources. In other words, the spending on policing and security in schools could potentially crowd out the spending on preventative care like counseling or restorative and transformative justice programs, as well as programs for college or career preparation. A limited amount of research has been dedicated to understanding how schools allocate their resources for school safety despite the growth in the use of costly security measures in schools. One study uses a comprehensive budget data set from Texas schools to investigate changes in the levels and proportions of school security spending. DeAngelis et al. (2011) review school budgets to show that poor, urban schools spend disproportionately more on

school security measures than other districts, and note that this entails not spending resources on other areas of schooling. Market research continues to show school security as a growth industry, and recent reports have highlighted the large number of schools in the U.S. with police or security staff but without counselors, nurses, psychologists, or social workers (IHS Markit 2018, American Civil Liberties Union 2019). Further, an under explored way that security may crowd out resources is through the time. For example, locker checks, walk-through metal detectors, and random sweeps may result in lost instruction time, therefore creating additional barriers to pursuing further education.

The impacts of carceral school environments may then be further compounded by the ways in which policing and security heighten the likelihood of student discipline and criminalization. Research shows that experiencing school discipline poses costs on students in terms of achievement, likelihood of dropout, likelihood of future arrest or incarceration, and negatively impacts achievement attainment. Shollenberger (2013) examines evidence from the National Longitudinal Study of Youth 1997, which surveys students graduating high school in the early 2000s. The study shows how being suspended has long-term impacts on educational attainment, likelihood of being arrested, and incarceration. The length of a student's suspension is highly correlated with a student's future educational attainment, with those having lengthier out of school suspensions (10 or more days) completing less years of schooling. For boys suspended at any point in school, 40 percent of black students, 42 percent of Hispanic students, and 36 percent of white students drop out and do not complete their high school diplomas. While some students who ever face suspension do go on to higher

education, a small proportion complete college degrees. Across all backgrounds, those who had ever been suspended were much more likely to have been arrested by their late 20s and eventually incarcerated, than those who had never been suspended from school. Research by Fernandes et al. (2016) shows school suspensions partially, but by no means completely, explaining standardized test score gaps, but recognizing that suspension itself is highly racially biased (Owens & McLanahan 2020, Riddle & Sinclair 2019, Skiba & Williams 2014).

Further, carceral school environments may burden students with stress under the threat of racial profile, experiencing bias, discipline, or criminalization. Research shows that the presence of metal detectors actually heightens students' sense of fear, and negatively impacts students' sense of safety, especially at urban schools (Gastic 2011). An environment of surveillance and police presence where students are perceived as threats, subject to racial profile, and subject to discipline and criminalization may also contribute to what (Steele 1997) calls stereotype threat, where the stress of an environment of negative stereotyping is emotionally and academically costly to students.

Given these dynamics, students may also develop what Shedd (2015) calls *perceptions of injustice*, which offers a framework for understanding how carceral school environments impact students, their perceptions, and their expectations. These dynamics then create compounding barriers to higher education, which may influence a student's expectation of whether or not they will actually attend or graduate from higher education in their future.

Further, Shedd (2015)'s notion of perceptions of injustice offers an important framework for understanding how students may perceive these forms of racial profiling, bias, discipline, and criminalization in school, and how this may impact students' perceptions and expectations. Students will have various perceptions and reactions to experiencing school security measures that may not always match with their expectations of how they should be treated in school. How students perceive the school security measures that they encounter each day is an important channel for shaping their expectations of their future educational attainment and achievement. Shedd (2015) develops this notion of perceptions of injustice to situate the experiences of students in Chicago schools. Using the definition from Jacob (1971)'s study, perceptions of justice describes how perceived justice and injustice differs across class and race regarding individual's view of the criminal justice system, or in this case the view of schools. Perceived justice is measured "the congruence between expectations about key officials in the justice system and perceptions of their actual behavior. Injustice is operationalized as incongruence, or a gap between expectations and perceptions." (Jacob 1971, 69-70). Shedd (2015) emphasizes that in order to have a conception of justice, or an expectation of how one should be treated, it is necessary to also have a conception of injustice.

Shedd (2015) draws on relative deprivation theory to build out a broader notion of perceived injustice. Relative deprivation theory states that individuals and groups may experience feelings of deprivation relative to that of other reference groups or individuals (Runciman 1966). Individuals experience deprivation in terms of class, status, or power, and that this is experienced when one group or individual wants

what another comparison or reference group or individual has. This theory of relative deprivation can be used to understand perceptions of injustice and unfairness in the context of schools and the lives of students. This notion of perceived injustice can be applied to how students experience their daily interactions with authority figures in public schools. Shedd writes that “Perceived injustice is a measurable phenomenon that powerfully captures adolescents’ attitudes about social and structural disadvantage, as informed by their personal and vicarious interactions with authoritative institutions and their representatives.” (Shedd 2015, 100)

In this way, perceived injustice captures the feeling of students that they are treated unfairly or unjustly by authority figures in school or by school security and discipline policies. Perceived injustice helps to explain how this perception may then translate to a student’s expectation of high education, as the expectation of such educational opportunities may be incongruent to that carceral environment. Shedd (2015) notes “A strong perception of inequality does not mean that those who rank high on perceptions of injustice- those, as discussed earlier, who believe the world is fundamentally unjust- are defeatists....Indeed, although as a group African Americans have historically experienced some of the country’s highest levels of discrimination, they report some of the highest commitments to education, equity, and opportunities.” Perceptions of injustice then helps us to understand how education in an unequal environment with systemic barriers including racial and gender bias, unequal resources, increased stress in school, and the heightened threat of punitive discipline and criminalization could influence a student’s expectations of their future educational prospects, therefore creating a structural enclosure to opportunity.

2.4 Data And Method

To empirically examine how these environments may work to structurally limit opportunity and choices, I use pooled data from several cross-section years of the National Crime Victimization Survey: School Crime Supplement to examine at the student-level how carceral school security impacts student expectations of going to college in the future.

2.4.1 National Crime Victimization Survey: School Crime Supplement

The National Crime Victimization Survey: School Crime Supplement (SCS) is collected by the National Center for Education Statistics, and Bureau of Justice Statistics with surveys in 1989, 1995 and then every two years from 1999 through 2015. The SCS survey is completed by students and asks questions about the school climate, student perceptions of safety, as well as student expectations of going to college, though college expectations were only asked on the survey from 2001 onward. The survey also includes variables on school characteristics and parents' employment and education. For each year, the student questionnaires are given to students 12-18 years old currently enrolled in a secondary school or any school advancing the student towards a high school diploma, including both public and private elementary through high schools, home school, vocational schools, and other qualifying institutions. The School Crime Supplement collects information on school safety, fighting and bullying, gang activity, and other relevant information. Roughly 6,500 are surveyed in year.

For my research, the important variables of interest are those having to do with school safety and student expectations of going to college, so I use the survey years available from 2005-2015. I focus on variables related to school security, race and ethnicity, gender, socioeconomic status, achievement, and expectations of the future. I will use students' self-reported grades to estimate their GPA as a control for student achievement, and the parent or guardian's reported household income and education level to control for family socioeconomic status. I also use gender, race (identifying as Black), ethnicity (identifying as Hispanic), and age as control variables. To control for issues of geographic location, I use the reported Metropolitan Statistical Area (MSA) status variable, indicating whether or not the individual lives in the central MSA, in the MSA but not central, or not in an MSA as measure for attending a school in a more urban area.¹ My independent variables of interest are those relating to the degree of which a student's school is carceral. This includes the responses to the survey questions in Table 2.3 about the student's school environment. Here, there are two different questions related to college expectations: do you expect to go to college and do you expected to graduate from a four-year college. I will analyze two models in which the first uses expectations of going to college as the outcome variable, and the second uses expectations of graduating from college as the outcome variable. I predict that the impact of going to a school with carceral security measures will be even stronger for expectations of graduating college. For these questions, student responses are "Yes", "No", and "I don't know". I choose to combine "No" and

¹See A.7 for values.

“I don’t know” as both indicating a negative or uncertain expectation of going to and graduating from college. Tables A.2 and A.3 in the Appendix show descriptive statistics by response including missing responses. For both expecting to attend any school after high school and expecting to attend a four-year college, the “I don’t know” responses are descriptively similar to “No” in terms of racial and gender composition, as well as estimated GPA, leading me to believe that combining “I don’t know” and “No” responses reflects the group of students uncertain about their future educational expectations.

For control variables, I include the race and ethnicity of the student (Black, white, and Hispanic), age (12-18 years), gender (male or female identifying), whether or not they attend a private school, their self-reported grades (calculated as a GPA on a 4 point scale), their reported household income, MSA status of residence, and parental education level.²

For my analysis, I used the National Crime Victimization Survey: School Crime Supplements for the years 2005, 2007, 2009, 2011, 2013, and 2015 for consistency across variables. With these six cross-sections, I create a pooled data set spanning these ten years. For all years, I restrict the observations to students currently enrolled in school and those that had complete answers to questions about expecting to go to or graduate from college. I dropped observations for students who were home schooled at the time of the survey. I also drop observations of students who do not have grades to report. My sample is restricted to those who answer that they are

²Household income is reported as income levels 1-14, see Appendix Table A.5

enrolled in high school (though this can have varying definitions across districts) and to non-missing responses to questions regarding expectations of college-going. With these restrictions, my sample then contains 12,184 observations of student responses to the School Crime Supplement survey.

2.4.2 Probit Model

For my analysis, I use a probit model to accommodate binary outcome variables. While there are many models for binary outcomes, different methods assume different underlying cumulative density functions (Cameron & Trivedi 2010). Using a probit model allows me to examine the impacts that occur in the tail end of the distribution as it assumes a normal distribution of errors (Long 1997). Probit analysis is also consistent with the conventions of the economics literature.

I will test two different binary outcome variables using this probit model: first I will estimate a model for whether a student expects to attend any college or technical school after high school, and then a second model specification with the outcome variable of whether or not a student expects to graduate from a four-year college in the future.

The following equation outlines my general model. For Model 1, the outcome variable Y_{it} is the binary outcome equal to 1 when the individual student i responding in survey year t expects to graduate from a four-year college in the future and 0 for responding no or do not know. Similarly, for Model 2, the outcome variable Y_{it} is the binary outcome equal to 1 when the student i expects to attend any college after high school. In both, X_{it} is the vector out carceral school environment variables and

control variables. In general, I estimate the probability that $Y_{it} = 1$ given X_{it} using the following:

$$Pr(Y_{it} = 1) = \theta(X\beta)_{it} \quad (2.1)$$

In Equation 3.1, θ is the normal cumulative distribution function. Equation 3.3 describes Y_i as a binary outcome variable.

$$Y_{it} = \begin{cases} 1, & \text{if yes} \\ 0, & \text{if no or do not know} \end{cases} \quad (2.2)$$

This basic probit model estimates the probability of the binary outcome variable Y_{it} as a function of X_{it} a vector of independent variables. More specifically, my model can be written as:

$$Pr(Y_{it} = 1|X) = \theta(X\beta) = \theta(\beta_0 + \beta_1 X_{1it} + \delta_2 X_{2it+it}) \quad (2.3)$$

Here in Equation 2.3, β_0 represents a constant term. X_{1it} is the vector of variables associated with a carceral school environment attended by student i . These variables are: whether or not there are metal detectors at school, locker checks, presence of guards or police at school, locked doors, identification badges required, and surveillance cameras. X_{2it} is the vector of control variables, which include race and ethnicity (Black and Hispanic), student's age, whether or not they attend a private school, gender, their estimated self-reported GPA, household income level, parental education level, and MSA status of their residence. ϵ represents the error term. Since I am

using pooled data, I also control for time varying effects by including an indicator variable for each survey year t .

For each X , the β coefficient estimates can be interpreted as likelihoods however, a more intuitive interpretation of the β coefficients can be obtained by estimating their average marginal effects. The average marginal effects estimates convey more intuitively, the probability change of Y_{it} being 1 given a one unit change in each variable of X_{it} (Long 1997).

2.5 Results And Discussion

For my estimates, I narrow my sample to students who completed the entire survey, are currently enrolled in high school in the year of the survey, are not home schooled, and who have grades to report. These restrictions bring my total number of observations to 12,184 with all years pooled. Each cohort has the following number of observations: 2005 has 2,494, 2007 has 2,265, 2009 has 1,742, 2011 has 2,114,, 2013 has 1,855, and 2015 has 1,714 (See Appendix Table B). My pooled panel data then to some extent over samples the older cohorts, but on average each cohort is roughly proportional.

2.5.1 Descriptive Statistics

Table 2.4 shows the descriptive statistics for my sample. In these data, about 95 percent expect to attend any form of college after high school, while roughly 86 percent of students respond that they expect to graduate from college. About 11 percent of students in the survey attend a school that has metal detectors, 56 percent

attend a school with locker checks, 77 percent attend a school with guards or police, 66 percent attend a school with locked doors during the day, 27 percent attend a school requiring identification badges of students and staff, and 77 percent of students attend schools using surveillance cameras. From these means, it is clear that some security measures are more ubiquitous across all schools- such as guards or police and security cameras. Yet other security measures such as metal detectors or required identification badges are less common. In my sample, 11.3 percent of students identify as Black and 18.3 percent as Hispanic. About 50 percent of the sample identify as male. The average age of a student in the sample is 16 years old, with respondents ranging from ages 12 to 18. About 8 percent of students attend a private school. The average household income level is roughly 12, which is \$40,000-49,999 in 2015. I estimate academic achievement is given by the responses to the question “During this school year, across all subjects I have gotten mostly....?”, with As, Bs, Cs, Ds, Fs, and no grades given at school as response options. Given these responses, I construct a very rough estimate of self-reported GPA with A=4, B=3, and so on. For students in this sample, the average estimated GPA was 3.2. The average parental education level is about 34, which corresponds to some college.³ These descriptive statistics are consistent with the sampling description of the survey as well as with national averages, giving me a roughly representative sample to analyze of these six cohorts.

³See A.6 for clarification of values.

Table 2.5 shows the mean of each of my independent variables by student responses to whether or not they expect to attend any college in the future and whether or not they expect to graduate from a four-year college in the future. These means show that on average in sample, students who do not expect to attend college are more likely to have metal detectors at school, experience locker checks, identify as Black or Hispanic, and identify as male. Students responding “No” also have a lower average estimated GPA than students responding “Yes” to expecting to attend any college, as well as a lower reported household income level. Similarly for expecting to graduate from a four-year college in the future, Table 2.5 shows that students responding “No” are more likely to experience metal detectors at school, have locker checks, identify as Hispanic (though not Black), and identify as male. Students responding “No” to expecting to graduate from college also on average have a lower estimated GPA and lower household income level.

2.5.2 Probit Regression Results: Impacts of School Security

Table 2.6 shows my probit results using the pooled School Crime Supplement data for 2005-2015. This table shows the calculated average marginal effects derived from my probit estimates for each independent variable for both models: In the first model, the outcome variable is a binary variable indicating whether or not a student expects to attend any college or technical school after high school in the future. My second model uses whether or not the student expects to graduate from a four-year college in the future as the outcome variable. For both, my independent variables include school security measures: metal detectors, locker checks, the presence of guards or

police in school, required identification badges, and surveillance cameras. I include several control variables: private school, gender, Black, Hispanic, age, estimated GPA, household income level, parental education level, and MSA status of residence. For both models I show the average marginal effects from my probit model, which can be interpreted as the average change in probability when the independent variable changes by one unit. In other words, given the presence of each carceral school attribute, how more or less likely is a student to expect to 1.) attend any college after high school? or 2.) graduate from a four-year college?

For my first model of expecting to attend any college after high school, metal detectors are associated with a significant -0.021 average marginal effect. Other security measures were not associated with significant negative marginal effects. In my second model of expecting to graduate from a four-year college, metal detectors are associated with a significant -0.024 marginal effect, while locker checks were associated with a -0.005 marginal effect, though not significant. Other security measures were not associated with negative marginal effects in both models, though surveillance cameras has a positive and significant marginal effect, however this security measure is generally ubiquitous across schools as shown in both 2.4 and 2.1. The second model similarly has positive marginal effects for security guards or police and identification badges, but however the data lack differentiation between police, security guards, and school resource officers and the specific policies regarding identification badges, so further research is needed to examine how these measures impact students.

I expected my first model to show stronger results since it is focusing on broader question about college after high school, and while some students may be deterred for a four-year college, many may still expect to attend technical school or other forms of training. This result perhaps suggests that students on the margin of deciding whether or not to attend any form of post-secondary schooling are negatively impacted by visible and intrusive security measures like metal detectors and locker checks. While these estimations have relatively small coefficients, the negative estimates and significance carry meaning. Since in my sample on average many students do expect to graduate from college (nearly 85.7 percent from my descriptive statistics), then this modest coefficient helps to explain at least in part an important factor in deterring student's expectations of continuing onto and completing higher education.

Looking at my control variables in both models, the results are consistent with the literature on student behaviors in the college application process as well as the literature examining student perceptions of injustice in schools. Identifying as Black has a positive and significant coefficient, meaning an associated increase in the likelihood of expecting to graduate from a four-year college, while age has a negative and significant coefficient, meaning a decrease in the likelihood of expecting to graduate from college as a student increasing in age. As noted earlier, the positive and significant marginal effect estimate for Black students is consistent with the literature showing that Black students are more likely to apply to college than their white or Hispanic counterparts when taking into account school quality, college readiness, and other factors (Black et al. 2015). Age has a negative coefficient in both models.

This estimate is consistent with the idea that students may be more likely to be deterred from continuing to higher education as they reconcile their expectations of their futures and their perceived reality of what their actual outcomes may be given institutional barriers.

2.5.3 Impacts of School Security by Race and Gender

Figure 2.2 shows the probit average marginal effects results for expecting to attend any college after high school by race and gender groups. These estimates are shown in more detail in Table 2.2. Notably in this figure, all students-Black, Hispanic, white, male, and female- have a negative average marginal effect for metal detectors. Locker checks have negative average marginal effect for Black males and Hispanic females, though limited effect for other groups. Of significance, is that Black males are the only group to have a negative, though not significant, marginal effect for the presence of security guards or police at school. For these students, having school security or police in school is associated with a negative -0.04 marginal effect for expecting to attend any college after high school. Surveillance cameras appear to have a strong positive marginal effect for Black male and female students, as well as white female students, but since surveillance cameras are fairly common across schools, more research is needed to interpret this result as well as the strong positive results for other groups. Surveillance cameras could potentially be correlated to school quality, but also could be providing students with a sense of accountability. Further research on the role of surveillance in schools and student perceptions of it would be important for interpreting this results. Figure 2.3 shows the probit marginal effects for "Ex-

pects to Graduate from a Four-Year College” by race and gender. These results are shown in Table A.11 in more detail. Here, metal detectors have a negative effect for all groups. Locker checks have a negative effect for Black males and Hispanic females, but small or positive effects for other groups. Similarly, A.10 shows that the estimated marginal effects for metal detectors are negative and larger for students identifying as Black and Hispanic. For Black students, locker checks also have a negative and significant marginal effect on the expectation of going to any college after high school. Locked doors also show a positive marginal effect, but this measure is fairly standard across schools. Similar to the first model, surveillance cameras have a positive and significant marginal effect, for Black students in particular, but due to the ubiquity of this measure across schools, further research is needed to disentangle this result. Both sets of results by race and those grouped by race and gender highlight that students of color, especially students identifying as Black and male students, tend to most negatively effected by the presence of visible and intrusive security measures- metal detectors and locker checks. Further, other measures such as security guards or police may have negative impacts on student’s expectations of their future educational attainment, particularly for Black males.

2.5.4 Robustness Checks

To check the robustness of these results, I run the same probit models with robust standard errors. In doing so, I find results that confirm my original findings as shown in Table A.8. Again, these results show a significant negative effect of metal detectors

for both models, as well as a negative effect for locker checks in Model 2, though not significant.

I also compare my model to two alternative approaches, a linear probability model and a logit model in Table A.9. My results appear similar across all models, though with varying significance levels and coefficients. However the direction of my coefficients match across models, providing evidence of consistent results. Further, examining my missing data in Tables A.2 and A.12 shows that students with missing answers to their college expectations questions were more likely to attending schools with metal detectors, for both questions. Students with missing college expectations answers were also slightly more likely to identify as Black and male. Given these missing data, I believe my estimates present a conservative estimate of the effects of school security measures on expectations of going to any college after high school and expectations of graduating from a four-year college.

2.5.5 Limitations: Data and Interpretation

Since my data do not offer school-specific identifiers, I am unable to implement school-level fixed effects for this analysis, which would improve the robustness of the estimates by accounting for school-specific trends. The SCS also relies on student self-reporting of school conditions, grades, and their expectations at the time the survey is given. Future research on this topic could be made more robust by using data including school identifiers to implement school-level fixed effects or having more detailed geographical identifiers. Missing observations are also a limitation, especially in analyzing the responses of students most on the margin of deciding whether or

not they expect to attend college in the future. Looking at Tables A.2 and A.3, the missing observations are not notably different in composition, though missing observations do tend to be more likely of those students identifying as Black and male. Another limitation is the grouping of both security staff and police officers as one variable in the data, as these positions differ greatly in their jurisdiction with the juvenile criminal justice system and therefore student perceptions of their authority.

2.6 Conclusion

Recently, the Black Lives Matter movement, and for decades student-led organizing around racial justice in schools, echo this fact in their calls to decarcerate schools: that policing, surveillance, discipline, and criminalization in school makes school feel more like a prison, and students feel they are treated as suspects instead of as students and learners with equal opportunities and choices. My results show that the presence of metal detectors has a negative and significant marginal effect of -0.021 on expecting to attend any college after high school, and a marginal effect of -0.024 on expecting to graduate from a four-year college. Locker checks have a negative -0.005 marginal effect on expecting to graduate from a four-year college, though not statistically significant. The negative marginal effects are generally stronger for Hispanic and Black students, and for male students. In addition, I find that for Black male students, security guards or police are associated with a negative, though not significant, marginal effect of -0.05 on expecting to attend any college after high school.

Future studies on the impacts of school security measures on students' expectations of going to college and actual long-term educational attainment should use data allowing for school-level fixed effects. Similarly, additional research should examine the channels through which carceral environments impact students' available choices and opportunities. Unfortunately, due to my limited data, I am unable to robustly test the channels of how carceral school security negatively impacts student expectations. Future research should examine how students internalize their school environments, and whether or not resource crowding out occurs due to expenditures on security in lieu of student services like counseling. Since I am unable to implement school-level fixed effects, one issue with these findings is that carceral measures may be proxies for poor quality schools. While this could be the case, further research using school identifiers and quality measures would disentangle this question and address the impacts of security while controlling for school quality. Further research should also examine how carceral environments effect teacher and staff bias towards students as yet another channel through which carceral schools reduce college expectations.

As shown, the pipeline metaphor of the STPP only narrow focuses on the links between schools and incarceration, but a broader approach that understands schools as carceral sites then shows how these environments work to uphold and perpetuate inequality. Rather than framing education, including higher education, as an antidote or cure to the STPP or to the carceral continuum, I instead show how these school environments create barriers to having the expectation of continuing to higher education through racial profiling, compounding bias, stressful environments, discipline,

and criminalization. This study provides background on how schools act as an integral site of the carceral state, and shows specifically on how the school environment—especially those with prison-like security, surveillance, and policing which I refer to as carceral schools—impacts students and their expectations for future education. My empirical research shows in high schools visible and intrusive measures in carceral schools, especially metal detectors and locker checks, negatively impact students’ expectations of future college-going especially for Black students and Hispanic or Latinx students, differing as well by gender. Focusing on this outcome does not posit that education ameliorates the problems of carceral schools, but rather shows how these environments through their structure may work to limit economic opportunities, uphold racial, gender, and economic hierarchies, consistent with the notion of an educational enclosure (Sojoyner 2013, 2016). I discuss the channels through which these inequalities and this enclosure manifests, including how prison-like school environments interact with existing racial and gender biases of teachers and staff, lead to increasing likelihood of punitive discipline and criminalization, how focus on building such environments may crowd out resources for care and access to economic opportunity, and how students’ may experience perceptions of injustice within these environments (Shedd 2015). I conclude that despite the assumptions around how these measures create “safety” at school, notions of safety are deeply racialized, gendered, and integral to issues of economic justice. This understanding beyond the school-to-prison pipeline means that schools, their environments, and their policies are critical to any discussions of criminal justice reform and the dismantling of the

carceral state, and further integrally connected to structural inequalities embedded in the economy.

Table 2.3: National Crime Victimization Survey: School Crime Supplement, Survey Questions

<i>Independent Variables</i>	
Does your school....	Have assigned security guards or police officers? Use metal detectors, including wands? Have locked entrance and exit doors during the day? Perform locker checks? Use security cameras to monitor schools? Have a requirement that students wear badges or picture identification?
<i>Dependent Variables</i>	
Thinking about your future...	Do you think you will attend school after high school, such as a college or technical school? Do you think you will graduate from a 4-year college?

Table 2.4: Descriptive Statistics

VARIABLES	N	mean	sd	min	max
Expect to Attend Any College After HS	12,184	0.954	0.209	0	1
Expect to Graduate from a Four-Year College	12,184	0.857	0.350	0	1
Metal Detectors at School	12,184	0.106	0.308	0	1
Locker Checks	12,184	0.564	0.496	0	1
Locked Doors	12,184	0.655	0.475	0	1
Security Guards or Police	12,184	0.766	0.423	0	1
Identification Badges Required	12,184	0.271	0.445	0	1
Surveillance Cameras	12,184	0.770	0.421	0	1
Private	12,184	0.0804	0.272	0	1
Black	12,184	0.113	0.316	0	1
Hispanic	12,184	0.183	0.386	0	1
Male	12,184	0.501	0.500	0	1
Age	12,184	15.95	1.231	12	18
Estimated GPA	12,184	3.205	0.778	0	4
Household Income Level	12,184	11.77	3.104	1	14
Parental Education Level	12,184	34.42	10.77	0	45
MSA Status	12,184	1.898	0.637	1	3

Table 2.5: Sample Means by Expecting to Attend Any College and Expecting to Graduate from a Four-Year College Responses

Expects to Attend Any College After HS	"No"		"Yes"	
	mean	N	mean	N
Metal Detectors at School	0.180	556	0.103	11,628
Locker Checks	0.576	556	0.564	11,628
Locked Doors	0.603	556	0.658	11,628
Security Guards or Police	0.759	556	0.766	11,628
Identification Badges Re- quired	0.277	556	0.271	11,628
Surveillance Cameras	0.721	556	0.773	11,628
Private	0.0216	556	0.0832	11,628
Age	15.94	556	15.95	11,628
Black	0.122	556	0.112	11,628
Hispanic	0.264	556	0.179	11,628
Male	0.683	556	0.492	11,628
Estimated GPA	2.482	556	3.240	11,628
Household Income Level	10.35	556	11.84	11,628
Parent Education Level	28.47	556	34.70	11,628
Residence MSA Status	2.009	556	1.893	11,628

Expects to Graduate from a Four-Year College	"No"		"Yes"	
	mean	N	mean	N
Metal Detectors at School	0.132	1,742	0.102	10,442
Locker Checks	0.592	1,742	0.560	10,442
Locked Doors	0.615	1,742	0.662	10,442
Security Guards or Police	0.730	1,742	0.772	10,442
Identification Badges Re- quired	0.254	1,742	0.274	10,442
Surveillance Cameras	0.759	1,742	0.772	10,442
Private	0.0276	1,742	0.0893	10,442
Age	16.14	1,742	15.92	10,442
Black	0.113	1,742	0.113	10,442
Hispanic	0.219	1,742	0.176	10,442
Male	0.619	1,742	0.481	10,442
Estimated GPA	2.706	1,742	3.288	10,442
Household Income Level	10.66	1,742	11.96	10,442
Parent Education Level	29.89	1,742	35.17	10,442
MSA Status	2.025	1,742	1.877	10,442

Table 2.6: Probit Average Marginal Effects

VARIABLES	Expects to Attend Any College/Technical School After HS	Expects to Graduate from a Four-Year Col- lege
Metal Detectors at School	-0.021*** (0.006)	-0.024** (0.010)
Locker Checks	0.000 (0.003)	-0.005 (0.006)
Locked Doors	0.007** (0.003)	0.024*** (0.006)
Security Guards or Police	0.002 (0.004)	0.027*** (0.008)
Identification Badges Re- quired	0.002 (0.003)	0.011* (0.007)
Surveillance Cameras	0.013*** (0.004)	0.018** (0.008)
Private	0.018*** (0.004)	0.069*** (0.008)
Black	0.008** (0.004)	0.035*** (0.008)
Hispanic	0.001 (0.004)	0.024*** (0.007)
Male	-0.019*** (0.003)	-0.045*** (0.006)
Age	-0.000 (0.001)	-0.019*** (0.002)
Estimated GPA	0.028*** (0.002)	0.085*** (0.004)
Household Income Level	0.002*** (0.000)	0.007*** (0.001)
Parental Education Level	0.001*** (0.000)	0.003*** (0.000)
Residence MSA Status	-0.010*** (0.002)	-0.035*** (0.005)
Observations	12,184	12,184

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Figure 2.2: Expect Any College After HS: Probit Average Marginal Effects by Race and Gender

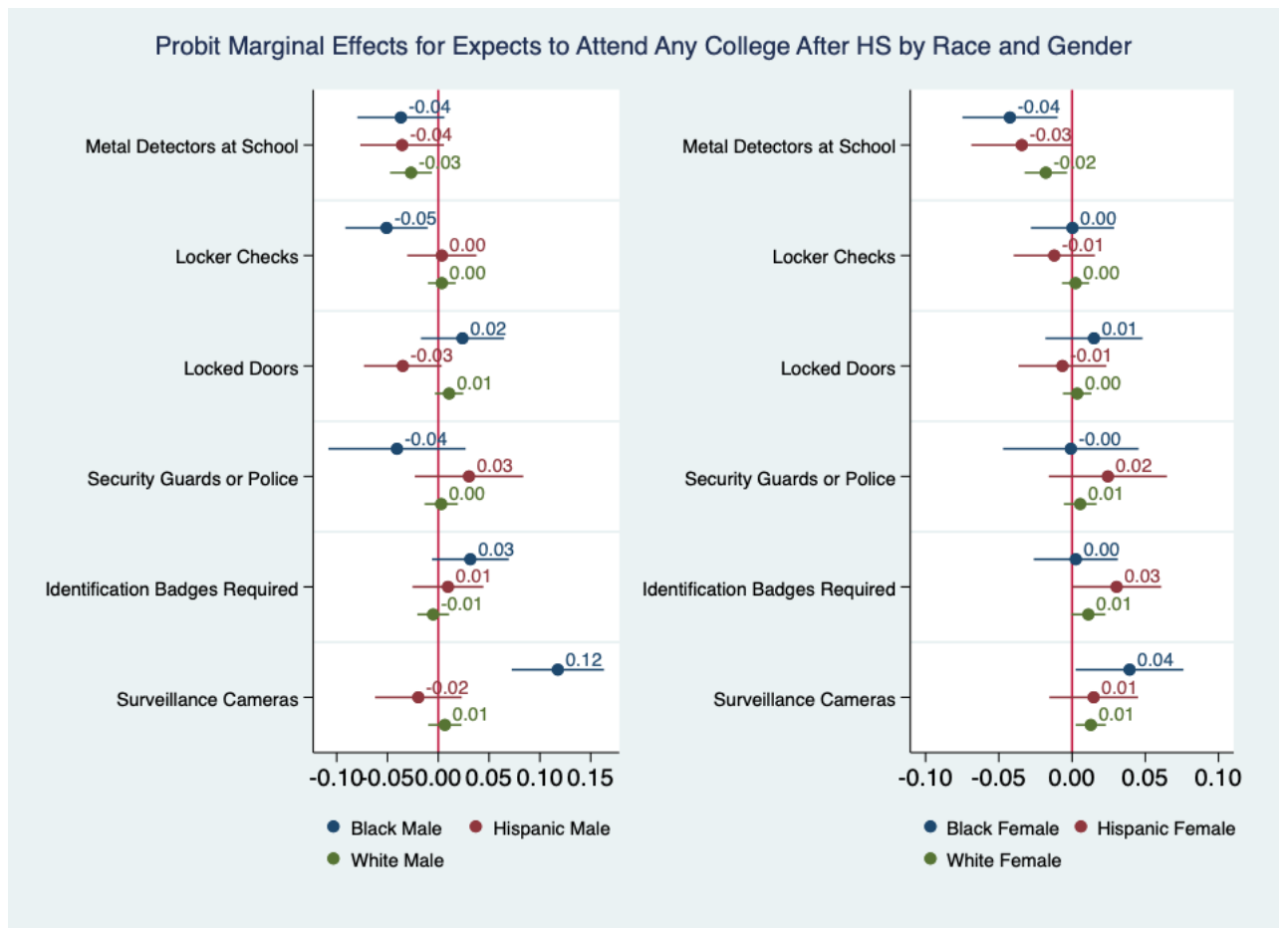
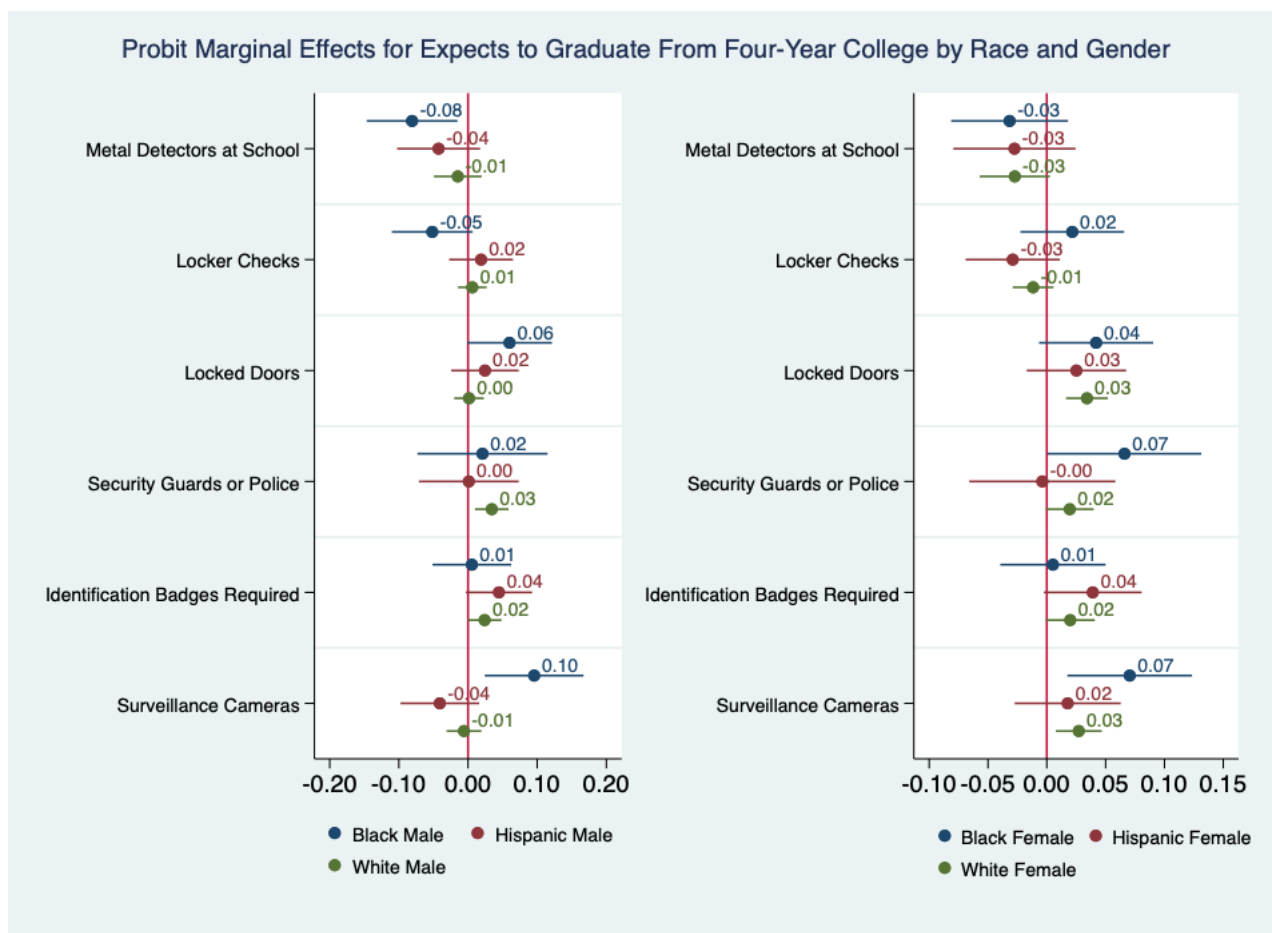


Figure 2.3: Expect to Graduate Four-Year College: Probit Average Marginal Effects by Race and Gender



CHAPTER 3

THE MARK OF SCHOOL DISCIPLINE: TESTING THE ROLE OF SCHOOL SUSPENSIONS IN COLLEGE APPLICATION DECISIONS AND ADMISSIONS

“We are in danger of producing an educated proletariat. That’s dynamite! We have to be selective on who we allow to go through higher education.”

*Roger Freedman, adviser to then California Governor Ronald Reagan, in 1970*¹

3.1 Introduction

This paper focuses on a research question in the context of United States public K-12 schools, the nexus of schooling and the carceral state, and the ongoing disparities in the use of school discipline by asking: *How does experiencing school discipline and holding a disciplinary record impact a student’s decision to apply to college and college admissions?* Answering this question addresses important concerns about the broad impacts of school discipline, but also raises additional questions about how punitive disciplinary practices in schools work to legitimate and uphold inequality, especially racial inequality.

¹Cited in Sojoyner (2013).

In past decades, the coalescence of zero tolerance discipline policies in schools, increased reliance on criminalization in schools, and rising economic inequality has created what is referred to as the school-to-prison pipeline, whereby discipline and criminalization in and out of school leads to increased likelihood of incarceration, criminal justice interaction, and drop out for students, especially Black, Latinx or Hispanic, Native or Indigenous, and other students of marginalized backgrounds. Over time, incidents of school discipline have increased across many schools and districts, and concern over this trend has also highlighted another barrier created by school discipline: how it impacts students' ability to go to college.

Similar to how criminal record disclosure exacerbates inequality in labor markets and limit economic opportunity for those holding records, reports indicate that school suspension records may play a similar role in college applications and admissions (Center for Community Alternatives 2015). I consider this question using a conceptual framework drawing from the literature on criminal records, labor markets, and Ban-the-Box policies to explore how experiencing school discipline may act as a negative credential that upholds economic stratification (Pager 2003). Using data from the High School Longitudinal Survey of 2009, I show some evidence that experiencing a school suspension is associated with a decreased likelihood of a student expecting to go to and applying to college, but inconclusive evidence of experiencing suspension impacting admissions to college. First, I use an ordered probit model to show that experiencing suspension in high school depletes student expectations of their future educational attainment. Next, I use a probit model to show evidence that school suspension has a negative marginal effect on whether or not

students decide to apply to college following high school. Finally, I use both a probit model and descriptive evidence to investigate if being suspended in high school impacts the likelihood of being admitted to a student's first choice college or university, and compare other post high school outcomes between students suspended and not suspended in high school.

I discuss a number of channels through which this may occur including how suspension may compound biases and gatekeeping to college preparation and application resources in school, students experiencing discipline may also be crowded into applying for less selective institutions, school discipline record questions on applications may deter students from applying to college or to more selective institutions, and that school discipline record questions on applications may screen students and act as a negative credential in the admissions process. Despite limited data, I also briefly examine other outcomes for students experiencing suspensions, such as labor market outcomes.

3.2 School Discipline, Incarceration, And The Carceral State

In U.S. public schools, the disparate use and severity of school discipline is associated with the phenomenon commonly called the school-to-prison pipeline (STPP), also referred to as the school pushout (Heitzeg 2009, Morris 2015). In K-12 schools, this dynamic is characterized by a number of related policies and practices: increased reliance on school discipline- especially exclusionary discipline such as out of school suspension-, increasing prevalence of school security measures, the rise of

zero-tolerance disciplinary policies, and use of police and the juvenile criminal justice system to deal with behavioral and disciplinary issues in public schools (Heitzeg 2009). These policies often criminalize the process of school discipline, and disproportionately impact students of color, especially Black students, students with disabilities, and those from marginalized socioeconomic backgrounds (Gregory et al. 2010, Skiba & Knesting 2001). The STPP framing however only narrowly draws the connection between school discipline practices and incarceration, but scholarship on the relationship between schools and the carceral state shows how carceral logics of discipline and racialized exclusion are embedded school environments (Sojoyner 2013). Like the criminal justice system itself, the carceral logic of schools too works to uphold and perpetuate existing forms of inequality by race, ethnicity, gender, ability, and socioeconomic standing inherit to the system of racial capitalism.

By 2012, the issue of disparate school discipline and its impacts became the topic of a Congressional Hearing in the U.S. Senate by the Senate Judiciary Committee and Subcommittee on Constitution, Civil Rights and Human Rights. In this hearing entitled “Ending the School-to-Prison Pipeline”, the opening statement from Senator Richard J. Durbin acknowledge that, “For many young people, our schools are increasingly a gateway to the criminal justice system. What is especially concerning about this phenomenon is that it deprives our kids of their fundamental right to an education.” (Committee on the Judiciary 2012) Durbin also acknowledges the carceral nature of school environments, noting “Sadly, there are schools that look more like prisons than places for children to learn and grow. Students pass through metal detectors and police roam the halls...Suspensions, expulsions, and in-school arrests lead

to kids being out of the classroom and a troubling increase in the number of young people sent to the juvenile justice system.” (Committee on the Judiciary 2012) Testimonies at the hearing show a clear relationship between disciplinary policies and negative outcomes for students.

Reports from the Department of Education outline stark disparities in punishment faced by Black, Latinx, and Native/Indigenous students in the public school system (U.S. Department of Education Office for Civil Rights 2014). According to the Office of Civil Rights Data Collection, at all age groups, Black students are three times more likely to be suspended than white students. Even at the preschool level, Black students represent 18 percent of enrollment, but 48 percent of suspensions. Roughly 82 percent of these children are suspended multiple times. Further, while boys receive the majority of suspensions, African American girls receive suspensions at a higher rate than girls of any other background, at a rate of about 12 percent. Even more concerning, Black students are disproportionately arrested and referred to law enforcement in school. Black students represent about 16 percent of enrollment, but 27 percent of those students referred to law enforcement and 31 percent of those subject to school-related arrest. Further, research shows clear bias in who is disciplined and criminalized in school for certain behaviors, while other students receive medical care for the same behaviors. Ramey (2015) shows that schools with more non-white and poorer students are more likely to discipline and criminalize students rather than “medicalize” students with treatment plans as called for by law.

As described by the joint “Dear Colleagues” letter published by U.S. Department of Education and the U.S. Department of Justice in 2014 pushing for nondiscrim-

ination in school discipline, the school-to-prison-pipeline is called such as school disciplinary practices leads students to be more likely to interact with the criminal justice system, be absent from school, drop out of school, or be incarcerated later in life (U.S. Department of Education and U.S. Department of Justice 2014). These direct negative impacts of the ‘pipeline’ have clear implications for economic outcomes. However, the prison pipeline metaphor both limits and obfuscates the true breadth of impacts that carceral school discipline poses, as well as its root causes. While the fact that school discipline is directly related to increasing the risk of being incarcerated, school discipline may also work to compound racial bias, alongside gender, ability and other biases in a variety of other ways. In this study, I will explore how school discipline may impact students’ expectations, decisions, and outcomes regarding applying to and attending college after high school specifically. While focusing on decisions about applying to and being accepted to a college or university, it should be emphasized that this work does not treat post secondary education as a solution for the racial disparities in discipline, schooling, or economic outcomes. Rather, this study focuses on how the punitiveness of discipline and the ways in which it is perceived may work to enclose and limit students’ choices, pathways, and possibilities.

3.3 Impact Of School Discipline On Student Outcomes

The racial disparities in experiencing school discipline are well documented. An ongoing body of empirical research shows the impacts of school discipline on student

outcomes, especially in relation to the criminal justice interactions that place schools as a central site of the carceral state. One meta-analysis of studies concerning the impact of school discipline on students shows in general, a negative correlation between suspensions and achievement, and a positive relationship with drop out (Noltemeyer et al. 2015). All forms of discipline including in-school suspension, out-of-school suspension, and combined suspension correlate to a negative impact on graduation and achievement, and increase in drop out, but with out-of-school suspensions having a stronger impact on achievement.

In a recent study of schools in North Carolina from 2008 to 2016, Sorensen, Bushway & Gifford (2020) examine impact of school principal-discretionary discipline, comparing schools with harsher policies to those with less strict disciplinary climates, focusing on middle schools. The study shows that for middle school students, experiencing harsher principals and thus exposure to a harsher school disciplinary climate, this exposure reduces high school graduation rates for all students, and results in declines in attendance as well as standardized test scores. The harsher principals in the study are associated with more juvenile justice complaints as well, and the researchers note revealed racial bias towards Black and Hispanic students in the study. In terms of an economic issue, one report, researchers estimated that school suspension in the 10th grade resulted in about 67,000 drop outs and a potential social cost of \$35 billion dollars in forgone incomes, taxes paid, as well as increased spending on health, crime, and welfare, and forgone productivity (Rumberger & Losen 2016b). Other studies also estimate the economic costs of exclusion

in schools, with a particular focus on the economic loss associated with dropout rates and future incarceration (Marchbanks III et al. 2014)

What about the impacts of school discipline on other outcomes? Shollenberger (2013) examines evidence from the National Longitudinal Study of Youth 1997, which surveys students graduating high school in the early 2000s. The study shows the long-term impacts being suspended has on educational attainment, likelihood of being arrested, and incarceration. The length of a student's suspension is highly correlated with a student's future educational attainment, with those having lengthier out of school suspensions (10 or more days) completing less years of schooling. For boys suspended at any point in school, 40 percent of black students, 42 percent of Hispanic students, and 36 percent of white students drop out and do not complete their high school diplomas. While some students who ever face suspension do go on to higher education, a small proportion complete college degrees. Across all backgrounds, those who had ever been suspended were much more likely to have been arrested by their late 20s and eventually incarcerated, than those who had never been suspended from school. Research by Fernandes et al. (2016) shows school suspensions partially, but by no means completely, explaining standardized test score gaps, but recognizing that suspension itself is highly racially biased. The focus on attendance, dropout, and incarceration are important, however there are further questions about how school discipline-a punitive practice reliant upon exclusion- compounds and perpetuates racial inequality and other disparities.

3.4 The Common Application And Disciplinary Disclosure In College Applications

The 2012 Congressional Hearing on the STPP included testimony from several organizations, groups, and individuals on the impacts of school discipline. Testimony from the Center for Community Alternatives alluded to the connection between school suspensions and enclosing opportunities for college admissions. In a discussion of alternative schools that enroll suspended students, they quotes one student who had been suspended for one-year for possession for a pen knife. He states:

“It makes people feel like they can’t do nothing with their life. They just drop out. ...I went to an alternative schools, After I felt ain’t nobody gonna want to take me back. ..If you write alternative school on your papers, the schools you went, to they look up your record. You might not even get into college. People out hear that you been suspended to alternative school gonna doubt you.’(Committee on the Judiciary 2012)

A 2015 report from the Center for Community Alternatives highlights the growing trend in college applications to ask students to disclose their disciplinary records from high school(Center for Community Alternatives 2015). Specifically, the report outlines how in the 2005-2006 cycle, the Common Application- a popular tool used my students- began asking a question on disciplinary history. After surveying admissions departments across many institutions, the report shows that:

“About three-quarters (73 percent) of colleges and universities collect high school disciplinary information, and 89 percent of those use the information in admissions decision making. Only one-quarter (25 percent) of colleges that collect disciplinary information have formal, written policies to guide their use of it, and only 30 percent of schools have trained their admissions staff to interpret disciplinary violation findings.” (Center for Community Alternatives 2015)

In response to issues with disciplinary record disclosure, the Common Application began allowing institutions the option of suppressing disciplinary history for their applicants. While data suppression became an option, the school disciplinary history question was not removed from the Common Application.

As of 2020, the disciplinary history box remains, but some institutions choose to suppress access to this information. The Common Application website lists member institutions based on their school discipline data suppression, summarized in Table 3.1.

Table 3.1: Common Application School Discipline Data Suppression by Institution

Common Application School Discipline Suppression	All Colleges and Universities	Four-Year Private	Four-Year Public
Response never reviewed	33	12	21
Contact institution for details	22	11	11
Response reviewed as part of enrollment process	8	3	5
Response reviewed as part of admissions process	15	2	13
Total	78	28	50

Source: Common Application

<<https://appsupport.commonapp.org/applicantsupport/s/discipline-history>>

While the Common Application has over 900 worldwide institutional members, information of school discipline record suppression is only available for a subset of these schools, and specifically for 78 U.S. institutions. Shown in Table 3.1, of the institutions reporting, at least 33 institutions never review the the response, but 15 review student disciplinary histories as part of the admissions process and an additional 8 review disciplinary history as part of the enrollment process. Of those institutions reviewing disciplinary history data for admissions, 13 of those are public four-year institutions. While these data may not be representative, the relatively high number of public institutions reviewing disciplinary records as part of admissions is of concern since the majority of students in the U.S. attend public institutions for post secondary education.

The persistence of the disciplinary box is cause for concern. Students in the U.S. are more likely to attend public colleges and universities, and these institutions appear to be more likely to both collect and consider disciplinary history data. Further, given the school discipline box on the Common Application, the Common Application has increased greatly in popularity in the past decade in part due to the reduced frictions and transactions costs that it offers to students applying to multiple institutions within the network (Knight & Schiff 2019). The account from the 2012 Hearing and the 2015 report from the Center for Community Alternatives highlight a potential obstacle facing students with disciplinary records. These findings motivate the question: how is school discipline contributing to exclusion from higher education for students wanting to pursue college or university?

3.5 Conceptual Framework: The Mark And Perception Of “Negative Credentials”

To understand how and why experiencing suspension and disclosing this record in the college application process may impact students’ decisions, choices, and admissions likelihood, I draw on the concept of a negative credential. Negative credentials are discussed widely in the literature on criminal records and labor markets. The research and theory developed by the work of Pager (2003) shows that a criminal record negatively “marks” job applicants, sharply reducing the number of callbacks and interviews for qualified applicants holding a criminal record, and the dynamic is compounded by racial discrimination. A criminal record then acts as a negative credential in the labor market, contributing to racial stratification, reduced earnings, and higher unemployment among the formerly incarcerated (Pager 2003, Harcourt 2011, Sandra & Simon 2020).

The negative credential framework is similar and related to that of labor market signaling theory, however mainstream signaling theory lacks a framework for taking into account historical and structural inequalities embedded in how individuals obtain credentials. In this theory, labor markets are characterized by incomplete information between employers and workers. For example, firms have limited information regarding the worker’s productivity until the worker is actually hired. A signaling model of the labor market argues that in the labor market workers can take on credentials to signal certain information to prospective employers such as the worker’s productive capacities. According to Spence (1973)’s article on job market signaling, workers signal their productive capacities by earning educational credentials to con-

vey this information in the market. In this model, credentials supposedly help to bridge an information asymmetry between workers and employers, and may be used strategically by workers hoping to signal in a competitive job market. But, lacking from this theory is an understanding how the structure of the economy based on economic and racial hierarchy determines perceptions of and access to such signals. For example, what if a negative credential is the result of structural racism and its perception as negative further compounds such inequality?

Pager (2003)'s findings, and other subsequent labor market studies of formerly incarcerated workers, show that criminal records act as a negative credential in the labor market when this information is openly available to prospective employers, *marking* applicants with a perceived negative signal (Holzer et al. 2006, Uggen et al. 2014, Agan & Starr 2017). Research shows that, in part as a result this mark, formerly incarcerated workers face higher unemployment levels, lower wages, and are more likely to work part-time despite the fact that many of these workers are qualified, tend to have longer job tenure, and lower turnover (Couloute & Kopf 2018). Many argue in fact that the criminal justice system and criminal records in particular- or more broadly the carceral state- work as a labor market institution based on exclusion, extraction, and maintaining racial stratification in the economy (Pager 2003). Given the challenges to the labor market faced by formerly incarcerated workers and grassroots activism advocating for removal of criminal record disclosure on job applications, many states and municipalities introduced Ban the Box (BTB) policies. Some evaluations of BTB show that such policies may increase forms of discrimination from private employers in labor markets, employers engage

in racial profiling of applicants (Doleac & Hansen 2020). But these impacts are due to the underlying structure of racial discrimination in labor markets, and the lack of enforcement of existing anti-discrimination laws in the private sector. In fact, Craigie (2020) shows important evidence that BTB initiatives at the Federal level have significantly increased public sector employment for those with convictions especially since the public sector has better enforcement of anti-discrimination laws. This example shows ample positive evidence for BTB as a policy, especially in tandem with policies that enforce existing laws and reduce discriminatory hiring practices.

Like the labor market, criminal records are also shown to impact college admissions. Stewart & Uggen (2020) show that about 72 percent of colleges require disclosure of criminal records in their application process, and that admissions rejection rates are 2.5 times higher for prospective students with criminal records. Criminal records also reduce or eliminate eligibility for financial aid awards as students with records are ineligible for Federal Pell grants and student loans at federal and state institutions, and ineligible for federal student loans at all other institutions (Eligibility for Students with Criminal Convictions 2018). In the case of college admissions, a criminal records may also be acting as a negative credential in the admissions process, leading to similar outcomes like that of the labor market. The examples of BTB in labor markets and the role of criminal records in college admissions then builds an analogous case for investigating the role of school discipline history boxes in college applications, especially given the prevalence and racial bias of school discipline.

School disciplinary records for forms of school discipline such as in-school suspension, out-of-school suspensions, expulsions, and in-school arrest are often collected as

part of the college application process, as noted in Table 3.1. In this research, I can model college applications and admissions similar to the labor market, where having a history of school discipline may act as a *perceived* negative credential, impacting both the labor supply side (student decisions) and the labor demand side (college and university admissions decisions). Students signal their qualifications to admissions staff and institutions through their application materials: transcripts, test scores, personal statements, and resumes. The presence of a high school disciplinary record may send a *perceived* negative signal to college admissions officers. Like criminal records, this negative mark may result in harsher treatment for racially minoritized students. Further, given the levels of racial bias in school discipline, this so-called negative credential then works to legitimize and perpetuate the racial, ethnic, gender, and socioeconomic inequalities underlying who experiences school discipline. Similar to Pager (2003)'s conception of criminal records, school discipline records may "mark" students for exclusion, rather than providing care and resources, functioning as "a unique mechanism of stratification, in that it is the state that certifies particular individuals in ways that qualify them for discrimination or social exclusion." In the case of school discipline then, schools and gatekeepers mark students for exclusion through the use of school discipline, resulting in exclusion in school through suspensions, detentions, and other disciplinary practices, as well as exclusion from choices and opportunities. This conception of how the negative credential of a disciplinary record marks students for exclusion coupled with the personal accounts of students in the Center for Community Alternatives (2015) report and Committee on the Judiciary (2012) then informs the question of asking how experiencing school

discipline impacts a student's expectations of future education, decision to apply to college, and admission to a college or university.

3.5.1 Discipline, Negative Credentials, and Bias at School

In this framework, it is important to understand how this negative credential results from racial and gender bias in school. School discipline may impact the college application decisions of students through the perceptions and actions of important gatekeepers to choices and options in school, such as teachers, guidance counselors, and other staff. Teacher bias in the classroom is well documented, with studies showing racially biased perceptions of students' behaviors, absences, and aptitudes. (Francis 2012, 2013, Campbell 2012, Condrón 2007, Downey & Pribesh 2004). Racial and gender bias of guidance counselors is also documented, with studies showing racial bias in counselor recommendations including those for advanced math coursework (Francis et al. 2019, Linnehan et al. 2011). Racialized tracking in schools limits student's opportunities for advanced coursework and other resources (Diette 2012). Given the research on bias at school, this raises the question to what extent discipline, already a result of racial bias, may further compound these dynamics and be used to legitimate these inequalities. It is possible that teachers and guidance counselors exhibit bias towards students who have been disciplined in the past. Student may be subject to this negative bias when interacting with guidance counselors and teachers, who are often the "gatekeepers" to the college application process.

3.6 Data Description

To investigate the impacts of school discipline records on college application decisions and outcomes, I use data from the High School Longitudinal Survey of 2009 (HSLs:09). The High School Longitudinal Study of 2009 is collected by the National Center for Education Statistics, and is a nationally representative longitudinal study of students beginning in 9th grade. The survey tracks students throughout their high school experience and into their post-secondary and labor force experiences. Table 3.2 shows the survey years and components of the HSLs:09 data. The base-year surveys were conducted in Academic Year 2009-2010 during the fall of the student's 9th grade year in school, and includes surveys of the student, parents/household, teachers, and school administrators. The first-follow up surveys were then conducted in 2012 during the student's 11th grade school year. In 2013-2014, the study collected additional update survey information from students in the fall including information on their post secondary and labor market experiences, as well as transcript and college application information. The survey also contains composite variables derived from the survey responses. The data contain observations from 23,503 students, and includes analytic weights to construct a representative sample for my analysis to account for sampling bias, missing data, and non response across surveys using the balanced repeated replications method.

Table 3.2: HSLs:09 Data Description

Survey Year	File	Survey Components
2009	Base Year	Student, Parents, Math/Science Teachers, School Counselors and Administrators
2012	First Follow-Up	Student, Parents, School Counselors and Administrators
2013	Update and High School Transcripts	Short Student Survey, HS Transcripts
2016	Second Follow-Up	Student, Parents, Administrative Data

The public-use HSL:09 does not contain detailed geographic information, school identifiers, or IPEDS codes for post secondary outcomes. However, some information regarding student outcomes is available in the public-use version including number of colleges applied to, selectivity and type for a student's first and second choice schools, and admissions outcomes for the first and second schools applied to, as well as work history including occupation and earnings. Regarding student experiences with school discipline, the public-use data contain questions about the student's experience with suspension, as well as survey questions to parents about the student's suspension history. In the public-use data set, information on school suspension histories includes:

- Parent Survey
 - Since starting kindergarten, has he/she ever been suspended or expelled from school? Do not count detentions (Base Year Survey 2009)
 - Since fall 2009, has he/she been suspended or expelled from school? Please include in-school and out-of-school suspensions, but do not count detentions (First Follow Up 2012)
- Student Survey
 - How many times did the following things happen during the last 6 months you were in school? You were put on an in-school suspension (First Follow Up 2012)

- How many times did the following things happen to you during the last 6 months you were in school? You were put on an out-of-school suspension or probation from school (First Follow Up 2012)

The public-use HSLs:09 also include detailed information on demographics, family/household income, parental education, and student expectations about their future.

3.6.1 Descriptive Statistics

The following table shows descriptive statistics for the HSLs:09 public-use data. Table 3.3 shows that in the data, 12.1 percent of students have reported suspension before entering high school according to the parent survey. About 13.3 percent have parent reported suspensions in high school. For the student survey, only 619 responses are recorded, resulting in very limited observations. Of those respondents, 11.4 percent of students report an in-school suspension in the last 6 months when surveyed in 2012 of the 11th grade year, 36 percent report an out-of-school suspension (likely a biased estimate), 13 percent report an in-school arrest, and 11.5 percent report being expelled. The student survey responses are likely biased due to limited responses. Table 3.3 also shows the summary statistics for student demographics and household characteristics. Using the weights provided in the HSLs:09 public-use data however, these are nationally representative.

Table 3.3: HSLs:09 Public Use Descriptive Statistics

VARIABLES	(1) N	(2) mean	(3) sd	(4) min	(5) max
Parent Reported Suspended Pre-HS	15,772	0.121	0.326	0	1
Parent Reported Suspended in HS	8,099	0.133	0.339	0	1
Student In-School Suspension	20,337	0.114	0.318	0	1
Student Out-of-School Suspension	619	0.365	0.482	0	1
Student Ever Expelled	619	0.132	0.339	0	1
Student Ever Arrested	619	0.115	0.319	0	1
Any Discipline Reported (Derived)	23,503	0.129	0.335	0	1
Student Applied to College 2013	23,503	0.905	0.293	0	1
Student Accepted to First Choice College	8,844	0.743	0.437	0	1
Black	23,503	0.104	0.305	0	1
Hispanic	23,503	0.164	0.371	0	1
Asian	23,503	0.0818	0.274	0	1
Other	23,503	0.0987	0.298	0	1
White	23,503	0.551	0.497	0	1
Female	23,503	0.490	0.500	0	1
Male	23,503	0.510	0.500	0	1
Total GPA in 2013	21,876	2.714	0.860	0.250	4
Private School	23,503	0.154	0.361	0	1
Enrolled AP Courses 2012	20,351	0.360	0.480	0	1
Math Aptitude Theta Score 2012	20,594	51.50	10.15	22.24	84.91
Number Absences 2012	20,309	1.527	1.073	0	4
Parent 1 Education 2012	20,919	3.501	1.699	1	7
Parent 2 Education 2012	16,261	3.332	1.759	1	7
Household Income 2012	20,919	4.633	3.051	1	13
Household SES Quintile 2012	20,919	3.234	1.423	1	5
Student Expects At Least Two-Year College	20,563	0.653	0.476	0	1
Student Expects At Least BA	20,563	0.594	0.491	0	1
Student Expects At Least MA	20,563	0.494	0.500	0	1
Student Expects At Least Doctoral/Professional	20,563	0.212	0.409	0	1

In Figure 3.1 as well as Table B.1, racial disparities in reported school suspensions are clear.

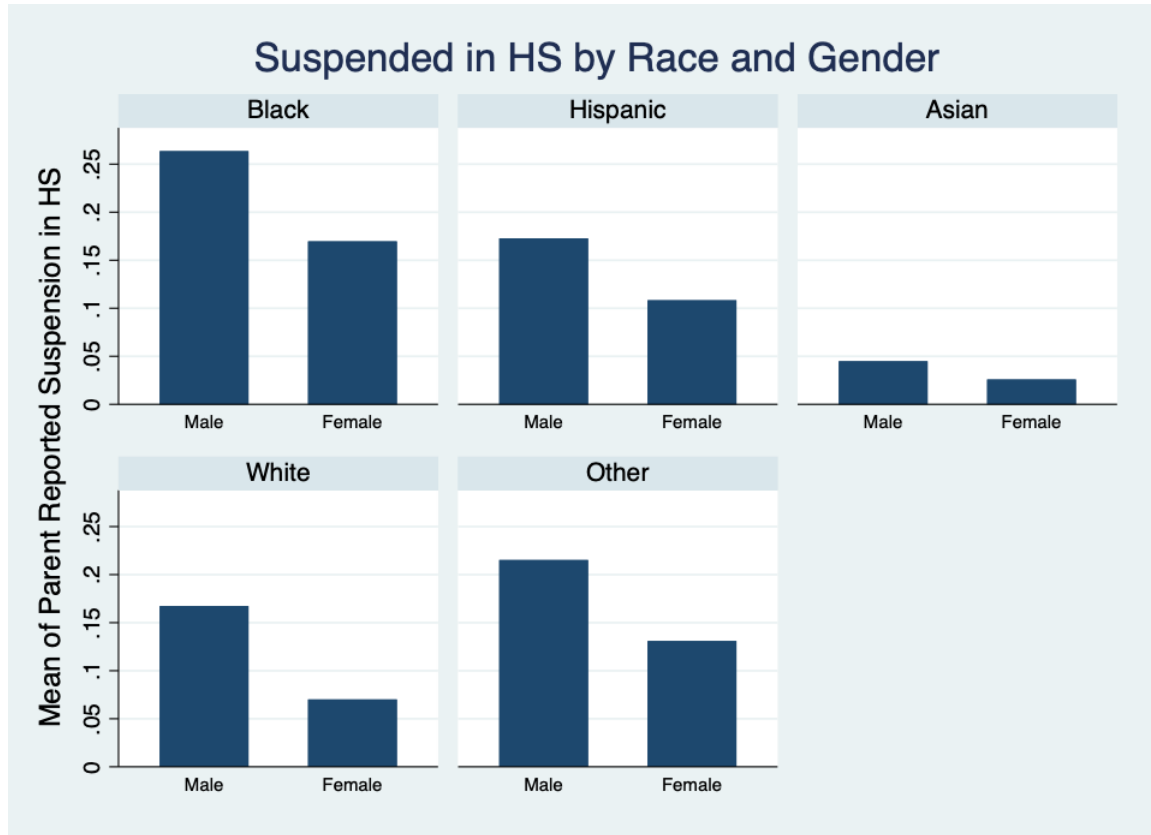


Figure 3.1: Parent Reported HS Suspension by Race and Gender

Consistent with national estimates of disparate experiences with discipline, Black male students are most likely to experience parent reported school suspension pf about 26.4 percent and Black female students are the most likely of any female group to have a reported suspension of 17 percent. Hispanic students also experience higher rates of school discipline with 17 percent of Hispanic males and nearly 11 percent of Hispanic female students having reported suspensions, meanwhile 16.7 percent of

white males have a reported suspension and just 7 percent of white females. The category other is composed of students from Native, Indigenous, Pacific Islander, and multiple race categories as constructed by the HSLs:09 survey. This group, though small in observation number, reports 21.5 percent of males experiencing suspension and roughly 13.1 percent of females.

For my control variables, Table B.3 shows the descriptive statistics of these variables by the student's parent report high school suspension history. Here, it is important to note that students with reported high school suspensions are more likely to be non-white, male, and with lower reported math theta scores and grades. These students are also less likely to take AP courses and the SAT. Further, these students are more likely to have experienced suspension before high school and more likely to experience in school arrest or expulsion. In terms of background, students experiencing suspensions have reported lower family income and socioeconomic status. Given this, observing an impact on college applications or admissions while implementing these controls should provide a potentially conservative estimate of how experiencing a high school suspension impacts student's college applications and admissions outcomes, since these suggest students with suspensions already face disparate barriers to college-going.

3.7 Method

To understand the impacts of experiencing school discipline, I examine the impact of school discipline on three different outcomes: expectations of future educational attainment, likelihood of applying to any college during high school, and likelihood of

being admitted to a student's first choice college. I then examine descriptive statistics to understand how experiencing school discipline impacts enrollment in college after high school, as well as other outcomes including full-time work and earnings. For each model, I follow the HSLs:09 documentation to apply analytic weights to the survey data using the balanced repeated replications method National Center for Education Statistics and Institute of Education Sciences (n.d.).

3.7.1 Model for Expected Education

For my first model, I look at how experiencing school discipline impacts expectations about education. Given that students must interact with important gatekeepers like teachers and counselors once they decide to pursue college, it is reasonable to think that experiencing discipline may impact those interactions and potentially, through racially biased advice and recommendations or other channels, lead to changing students' expectations of their future education.

In the data, I can observe through the parent and student surveys whether the student experienced any form of suspension or expulsion since beginning high school, whether the student reported experiencing an in-school suspension in the last 6 months when surveyed in 2012, whether the student reported experiencing an out-of-school suspension in the last 6 months when surveyed in 2012, whether the student had ever been arrested in the last 6 months of 2012, and whether the student had ever been expelled in the last 6 months of school. As shown in my summary statistics however, observations for student reported suspensions, expulsions, and arrested are very limited, making estimation potentially biased. There may also be reason to

believe students under-report their disciplinary histories when surveyed. Given this, I use the measure of parental reported suspension in high school in 2012 as a measure of a students' disciplinary history. This variable asks parents in 2012, the student's 11th grade year, whether the student has experienced any form of suspension while enrolled in high school since 2009. While these observations do not fully capture students' experiences with school discipline during high school, I can still use this measure to examine if this reported suspension history impacts college application decisions and outcomes.

In the base-year survey in 2009 during their 9th grade year, students were asked to report their expected levels of education as an adult. This question was then repeated in the 2012 survey, when students were now in 11th grade. I use students' expectations in 2009 then as control variables in my estimation to begin to isolate the independent impact of experiencing discipline. Since the expectations is measured as an ordered outcome, I used an ordered probit model Cameron & Trivedi (2010). Using this approach, I estimate the impact of parent reported high school suspension on educational expectations, while using students' 2009 expectations as a control variable along with other observable changes in students' in-school behaviors of taking AP courses, number of absences, and whether the student took the SAT. For 2012, I do not have a measure of the students' GPA so this is excluded. I also exclude demographic and family background, as these are highly correlated with the students' educational expectations in 2009. My model then is as follows:

$$Prob(\alpha_k < Y_{it} < \alpha_k)) = \Theta(\beta Suspension_i + \gamma Expectations_{i,t-3} + \delta X_i + \varepsilon_i) \quad (3.1)$$

Here, Y_{it} represents the outcome variable of what level of education the student expects to obtain as an adult as surveyed as a 11th grader in 2012, ranging from 1 for expecting to complete at least igh school to 12 complete a doctoral or professional Degree. *Suspension* is the variable from the parent survey indicating whether or not the student has experienced any form of suspension during high school, *Expectations* is the variable from the student survey in 2009 measuring the baseline of what level of education the student expects to obtain as an adult when surveyed in 9th grade, and X_i is a vector of control variables for student absences, AP course enrollment, and if the student has taken the SAT. By using the 2009 base survey response about educational expectations as a control variable, I can attempt to isolate the impact of experiencing suspension in high school on changes in the student's expectations when surveyed later in 11th grade during 2012. Using β , I can calculate the average marginal effect of having a reported suspension on the likelihood of each student's expected educational attainment. This allows for me to understand how experiencing school discipline such as suspension impacts a student's expectations of their future education.

3.7.2 Model for Applying to College

Similar to education expectations, given the literature on bias and discipline, a school discipline history may create barriers for students in choosing to apply to college. As the report from testimony from (Center for Community Alternatives 2015) described, college applications asking for disciplinary history disclosure may work to

deter students from applying. Issues of teacher and counselor bias, compounded by experiencing discipline, may also result in reducing the likelihood of applying to college as well. Given that, I model the impact of reported suspension history on a student's decision of whether or not to apply to college for the Fall 2013 semester following high school. From the student's 2013 transcript and follow up survey, I use the variable of whether or not the student applied to any college for Fall 2013 enrollment. Being a binary outcome variable, I use a probit model to estimate the impact of experiencing a reported suspension on the likelihood that a student applies to college (Long 1997). I model this here in (3.3):

$$Prob(Y_i) = \Theta(\beta Suspension_i + \gamma StudentDemographics_i + \delta X_i + \varepsilon_i) \quad (3.2)$$

Where Y_i is the binary indicator having having applied to college ranging from 0 to 1. *Suspension* is the variable from the parent survey indicating that the student has experienced some form of suspension or discipline since beginning high school. *StudentDemographics* is a vector of indicator variables for race (Black, Hispanic, Asian, White, and Other) and gender. The vector X are control variables for student achievement including the students' GPA at graduation, Math aptitude theta score in 2012, absences, AP course enrollment, and whether or not to student took the SAT, as well as family characteristics including family income, parental educational levels, and the household's socioeconomic status quintile accounting for location and occupation. Estimating β then allows me to derive the average marginal effect of reported discipline on the probability of applying to college for Fall 2013. While I cannot observe whether or not students applied to schools requiring them to disclose

their suspension and disciplinary histories, I can use this estimate to understand if holding a suspension record impacts application behaviors at all, and further I can examine this effect by groups of college sector applied to, given the relative prevalence of disciplinary record disclosure for public colleges and universities. I can also examine the impact of reported suspension on application decisions by race and gender, to understand if these dynamics may differ for each group.

3.7.3 Model for Admitted to First Choice College

In my third model, I examine the role of reported suspensions in the likelihood of the student being admitted to their first choice college. As suggested by the report from Center for Community Alternatives (2015), some colleges and universities use a student's high school disciplinary record in their admissions decisions. Given the disparities in school discipline, this perception of a negative credential by college admissions offices may be working to exclude students. Ideally, testing this empirically would require full information about student's disciplinary histories as well as the specific college or university's application materials and admissions policies. Unfortunately, detailed information about transcripts and the full set of college applications is not available in the HSLs:09 public-use files, but I can observe whether or not the student was admitted to their first choice college or university, though it is difficult to distinguish whether or not this first choice is necessarily most selective or how this choice may be influenced by other factors, including discipline.

Using a student's first choice college admissions status as an outcome variable, I can then model using a probit estimation the impact of a suspension record on being

admitted to a student's first choice of schools applied:

$$Prob(Y_i) = \Theta(\beta Suspension_i + \lambda SchoolCharacteristics + \gamma Student_i + \delta X_i + \varepsilon_i) \quad (3.3)$$

Here, Y_i is a binary outcome variable for being accepted or admitted to the student's first choice college. *Suspension* is the variable for parent reported suspensions in high school, *SchoolCharacteristics* is a vector of characteristics of the college or university applied to including its level (two-year or four-year), sector (public or private), and selectivity rating (highly selective, moderately, inclusive, etc). The vector *Student* includes race indicators as well as gender, and student characteristics such as if they attend a private school, their final high school GPA, if they took the SAT or ACT exam, if they enrolled in AP course, their math aptitude theta score, and reported absences. The vector X includes other control variables such as family/household income, parental education levels, and household socioeconomic status quintile accounting for location and occupation. With this, I can estimate the average marginal effects of reported suspensions on admission to the student's first choice college or university, for those that applied. Though I cannot observe if these college applications required the student to disclose their disciplinary record, I can examine if holding such a record through reported suspensions impacts the likelihood of being accepted.

3.8 Results

Following my analysis, I show the results for marginal effects of each of my three models.

3.8.1 Results: Expectations of Education

In 3.2 I show the predicted probabilities estimated from my ordered probit model of student expectations of their future education by their reported high school suspensions, with the full results in Table B.4.

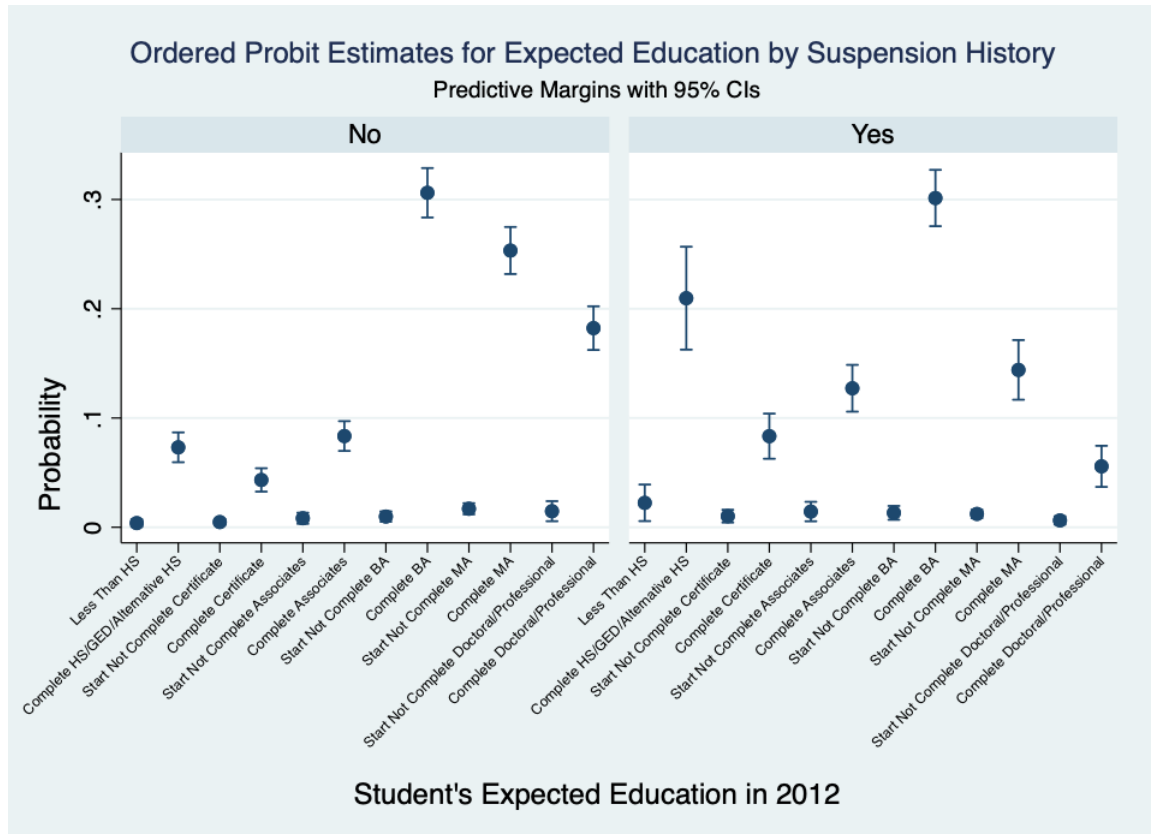


Figure 3.2: Ordered Probit Marginal Effects of Reported Suspension on Education Expectations

These estimates show that for students having a parent reported school suspension, they are more likely to expect to not graduate from HS (0.0223) than students without suspension reported (0.004), only graduate from HS (0.210) than students

without suspension (0.073), obtain a certificate (0.083) than students without suspension (0.043), or obtain an associates (0.127) than students without suspension (0.083). Conversely, students with a suspension reported are less likely to expect to earn a master's degree (0.144) compared with (0.253) or a doctoral or professional degree (0.056) compared with (0.182), as compared with students without a suspension reported. Interestingly however, both groups appear to report the same predicted marginal probability of expecting to earn at least a bachelors degree with (0.306) predicted for students without suspension and (0.301) for students with reported suspensions. This result perhaps indicates that discipline may lead to students adjusting their expectations, yet still intending on pursuing high education regardless of experiencing a suspension.

3.8.2 Results: Decision to Apply to College

In Table 3.4, I show the descriptive statistics of variables related to applying to college for students with and without high school suspensions, as reported in the parent survey. I focus on the measure of suspension in the parent survey due to potential issues with sample size as well as selection bias in the student survey questions.

This table shows that about 91 percent of students without a reported suspension in high school applied to college for Fall 2013 while 79 percent of those with a reported suspension applied. About 75 percent of students without a reported high school suspension were accepted to their first choice college or university, compared with about 67 percent of those with a reported high school suspension. Given the prevalence of school discipline record disclosure required for public institutions

Table 3.4: Descriptive Statistics of College Characteristics by Suspension

VARIABLES	Not Suspended in HS			Suspended in HS		
	N	mean	sd	N	mean	sd
Applied to College 2013	7,025	0.913	0.282	1,074	0.791	0.407
Accepted to First Choice College	3,316	0.747	0.435	224	0.665	0.473
First Choice College Public	3,444	0.655	0.475	246	0.711	0.454
First Choice Highly Selective	4,684	0.264	0.441	357	0.0672	0.251
First Choice Moderately Selective	4,684	0.314	0.464	357	0.143	0.350
First Choice Inclusive Four-Year	4,684	0.0858	0.280	357	0.101	0.302
First Choice Not Classified Four-Year	4,684	0.0628	0.243	357	0.0728	0.260
First Choice Two-Year	4,684	0.264	0.441	357	0.594	0.492
First Choice Less Than Two-Year	4,684	0.00961	0.0976	357	0.0224	0.148

shown by (Center for Community Alternatives 2015), it is important to examine if students without a disciplinary history may be more likely to be applying to public institutions. In this sample, about 66 percent of students without a reported suspension apply to public institutions, while about 71 percent of students with a reported high school suspension apply to public colleges or universities. Table 3.4 also shows stratification in applications by college and university selectivity. Students without any reported high school suspension are much more likely to apply to highly selective or moderately selective colleges and universities, while students with a reported high school suspension are more likely to apply to two-year institutions.

For Model 2 examining how school discipline impacts the decision to apply to college, Figure 3.3 and Table B.5 show the marginal effects for five different discipline variables: parent reported high school suspension (includes being expelled), student

reported in-school suspension, student reported out-of-school suspension, student reported ever arrested, and student reported ever expelled. In each iteration, I control for student demographics, if the student took the SAT, enrolled in AP courses, their total GPA when graduating, their math aptitude score, number of absences, if they attend a private school, parental education in 2012, household income in 2012, and household socioeconomic status quintile in 2012. For the student reported variables, each of these asks the student if these forms of discipline have occurred within the last 6 months when surveyed in 2012 during their 11th grade year.

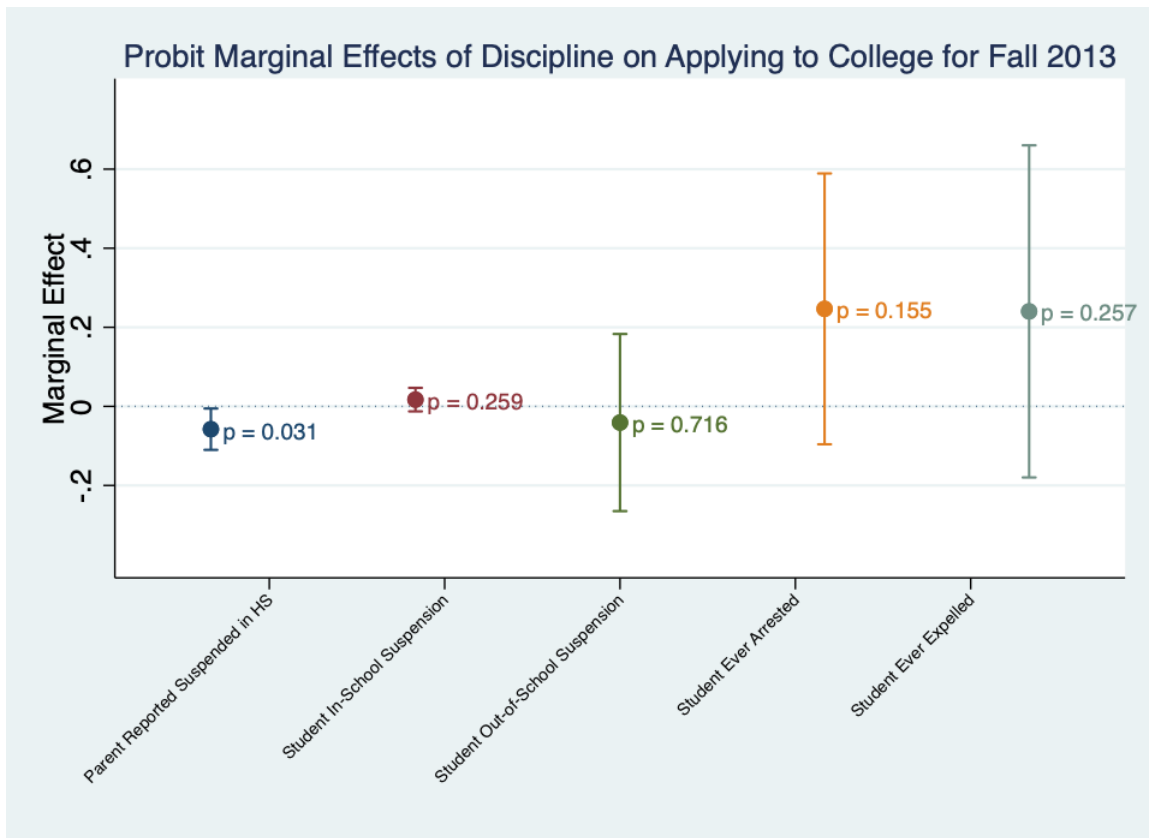


Figure 3.3: Probit Marginal Effects of Discipline on Applying to College for Fall 2013

In Figure 3.4 and Table B.6 I examine how this effect may differ within groups by race and gender. Due to the limited number of observations for each group, even using the measure of parent reported high school suspensions and the balanced repeated replications method, these estimates are difficult to interpret. Figure 3.4 shows the marginal effects coefficients by race and gender groups, however the detailed estimates in Table B.6 show that these estimates, due to a small number of observations, have large confidence intervals. However, I do find that across racial and gender groups a consistent negative impact of high school suspension on the decision to apply to college, even when controlling for student and household characteristics, with the exception of the category of Other male which has limited observations. However, these results do not show statistical significance with the exception of Hispanic male Students, but these results give evidence that the impact of suspensions and school discipline generally likely have differential impacts by race and gender, but more detailed data is necessary to fully show these disparities and how they may have differential impacts on the decision to apply to college.

In this model, I find that the measure of parent reported suspension in high school has a -0.058 marginal effect, meaning that for students with a reported high school suspension, my model estimates they are more than 5 percent less likely to apply to college than students without a reported suspension. This result is significant at the 95 percent confidence level. For other measures of discipline, likely due to issues of selection bias in reporting and limited observations, I find limited and inconclusive impacts on the decision to apply to college for Fall 2013. While other measures of discipline may be inconclusive, the most reliable measure of parent reported high

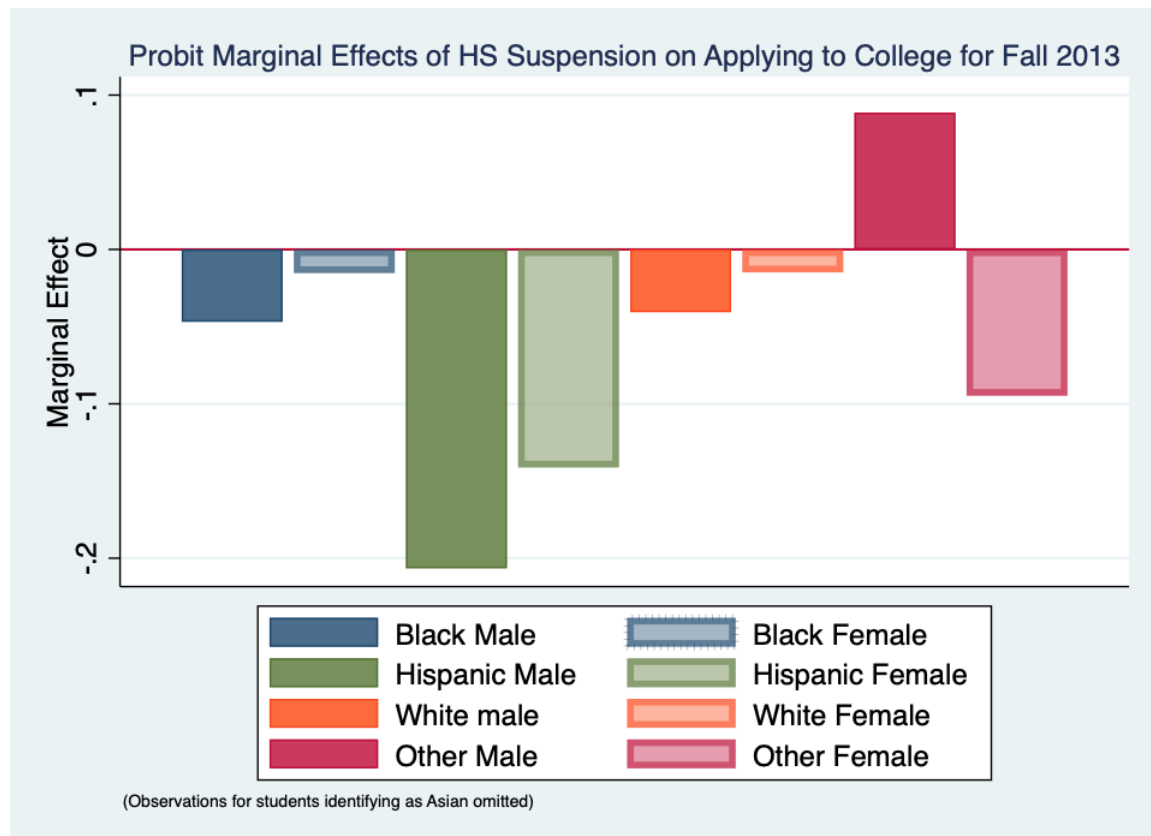


Figure 3.4: Probit Marginal Effects of HS Suspension on Applying to College by Race and Gender

school suspension shows evidence that suspensions may impact a student's decision to apply to college. While there are a variety of reasons that students may decide to not pursue post secondary education following high school, this result does give some preliminary empirical evidence echoing the experiences of students as discussed in the 2012 Hearing (Committee on the Judiciary 2012).

3.8.3 Results: Admission to First Choice College

Given the limitations of the public-use HSLs:09 data as well as issues with measurement and reporting of school discipline, estimating the true effect of disclosing one's high school disciplinary record in college admissions is difficult and unable to be isolated. However, I offer an initial examination using the available data of how a reported high school suspension impacts the likelihood that a student is admitted to their first choice college or university for Fall 2013. In this model, I focus on the outcome variable of being accepted to the student's first choice of colleges among those to which they applied. In my model, I use the parent reported suspension as of 2012 as a measure of if the student has experienced discipline or suspension due to the limitations of the other measures. I find a very small marginal effect of 0.010 but lacking statistical significance. This model controls for student demographics, parental and household characteristics, the student's GPA and math aptitude score, if they took the SAT, as well as the selectivity of their first choice school and if that school is public.

Given the descriptive statistics in Table 3.4, this limited impact is likely in part due to the tendency of students with a reported suspension in high school to apply more so to inclusive or two-year colleges and universities.

3.8.4 Results: Descriptive Statistics of Other Post-HS Outcomes

The question of how school discipline may mark students both in the short and long-run also implies looking at other outcomes besides deciding to apply to college or being accepted to a first choice institution. In Table ??, I provide descriptive statistics of other outcomes by reported high school suspension, including the student's post high school earnings in 2012 and their reported full-time focus.

Table 3.5: Probit Results Marginal Effects of Suspension on Acceptance to First Choice College Fall 2013

Probit Marginal Effects of Suspension on Acceptance to First Choice College Fall 2013	
(1)	
VARIABLES	
Suspended in HS	-0.010 (0.058)
First Choice College Selectivity (1-5)	0.084*** (0.018)
First Choice College Public	0.014 (0.040)
Observations	2,636

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Table 3.6: Other Outcomes by Reported Suspension in HS

VARIABLES	Not Suspended		Suspension Reported		Missing/No Answer		min	max
	mean	N	mean	N	mean	N		
Hourly Earnings in 2013	8.925	2,877	9.232	362	9.080	4,939	6	25
Full-Time Post-Secondary	0.696	5,883	0.330	779	0.619	10,582	0	1
Full-Time Working	0.118	5,883	0.275	779	0.149	10,582	0	1
Full-Time Military	0.0207	5,883	0.0359	779	0.0216	10,582	0	1
More Than One Focus	0.138	5,883	0.234	779	0.165	10,582	0	1
Other Focus	0.0270	5,883	0.126	779	0.0450	10,582	0	1
Black	0.0995	7,025	0.180	1,074	0.101	15,404	0	1
Hispanic	0.158	7,025	0.169	1,074	0.167	15,404	0	1
White	0.560	7,025	0.494	1,074	0.551	15,404	0	1
Female	0.518	7,025	0.334	1,074	0.489	15,404	0	1
Male	0.482	7,025	0.666	1,074	0.511	15,404	0	1
Suspended pre-HS	0.0693	5,512	0.445	654	0.128	9,606	0	1
Any Discipline Reported	0.0572	7,025	1	1,074	0.101	15,404	0	1

While mean hourly earnings appear slightly higher for students suspended, this is likely due to the fact that 27.5 percent of suspended students report working full-time after high school, compared with 11.8 percent of those reporting not being suspended. Students having reported suspensions are also less likely to be working full-time on post secondary schooling, with a mean of 33 percent of students with a reported suspension as compared with nearly 70 percent of students without a suspension with post secondary school as as a full-time focus.

3.9 Conclusion And Further Research

This study using the HSLs:09 data shows evidence that experiencing school discipline impacts students' expectations of going to go to college, decisions about applying to college, and the outcome of college admissions, showing that school disciplinary records may work as a negative credential in the process. Here, I show modest evidence that experiencing school discipline has a negative impact on student's expectations of their future education and decisions to apply to college. I show descriptive evidence that students experiencing discipline are also more likely to pursue inclusive, less selective colleges and universities and two-year institutions following high school, as well as being more likely to enter to labor market full time. Due to data limitations, this study shows inconclusive evidence of school suspension records impacting college admissions, but the review of literature in this study shows further research into this issue is important. While limited data make my results non-causal, further research into understanding how school discipline may work to uphold and legitimate these forms of inequality is needed, including further empirical

studies of the role of discipline boxes in admissions as well as approaches like audit studies. The channels leading to these differential outcomes should also be explored, including how experiencing suspension or discipline in school may influence teacher, counselor, and staff perceptions of students and limit or shape the guidance they receive regarding careers and education after high school.

Further, having drawn on the framework of a negative credential or market signal, it is important to unpack the signaling model in the context of structural inequality. Do signals and credentials signal objective information about students or job applicants, or do they instead work to both legitimize and perpetuate inequalities by race, ethnicity, gender, and socioeconomic status? Lastly, given the deep disparities in discipline and the carceral nature of its use, further work can also show how providing alternatives to discipline, such as resources, care, building truly inclusive environments and pedagogical practices, inclusive curriculum, and providing restorative and transformative justice practices in schools can work to mitigate issues of racial bias in schools and work to dismantle underlying power structures of racial and economic hierarchy.

APPENDIX A

**CHAPTER 2 CARCERAL SCHOOLS AND COLLEGE
EXPECTATIONS: APPENDIX OF ADDITIONAL TABLES AND
RESULTS**

Table A.1: Percentage of Public Schools with Security Staff Present At Least Once a Week

School characteristic	Percent with one or more security staff		Percent with any security staff routinely carrying a firearm	
	2005–06	2015–16	2005–06	2015–16
All public schools	41.7	56.5	30.7	42.9
School level				
Primary	26.2	45.4	15.7	30.6
Middle	63.7	73.4	51.8	60.0
High school/combined	62.9	71.3	51.8	60.7
High school	75.2	81.0	64.0	70.9
Combined	43.5	51.2	32.4	39.7
Locale				
City	49.1	61.9	30.5	36.0
Suburban	42.7	57.9	32.2	44.6
Town	44.4	62.0	38.1	56.5
Rural	33.8	46.7	27.1	41.3
Percent combined enrollment of Black, Hispanic, Asian, Pacific Islander, and American Indian/Alaska Native students, and students of two or more races				
Less than 5 percent	28.3	44.7	22.9	41.0
5 percent to less than 20 percent	38.9	54.3	30.2	47.5
20 percent to less than 50 percent	41.6	49.9	35.3	43.0
50 percent or more	51.3	63.7	31.3	40.4
Percent of students eligible for free or reduced-price lunch				
0 to 25 percent	37.9	52.9	30.3	42.5
26 to 50 percent	42.1	50.8	33.8	41.3
51 to 75 percent	39.3	58.7	31.8	49.0
76 to 100 percent	49.8	62.2	25.6	38.9

Source: NCES Digest of Education Statistics 2017, Table 233.70.

Table A.2: Expects to Attend Any College After HS: Raw Data and Missing Observations Descriptive Statistics by Response

Student Response	"Yes"		"No"		"I Don't Know"		Missing	
Expects to Attend Any College	N	mean	N	mean	N	mean	N	mean
Metal Detectors at School	28,485	0.101	1,385	0.152	1,835	0.116	308	0.149
Locker Checks	27,355	0.531	1,308	0.536	1,766	0.540	291	0.495
Security Guards or Police	28,483	0.693	1,385	0.624	1,836	0.645	312	0.654
Locked Doors	28,486	0.660	1,385	0.647	1,836	0.594	306	0.585
Identification Badges Required	28,481	0.242	1,384	0.260	1,837	0.209	306	0.258
Surveillance Cameras	28,482	0.712	1,385	0.699	1,837	0.636	307	0.573
White	28,498	0.785	1,387	0.795	1,838	0.813	29,214	0.776
Black	28,498	0.130	1,387	0.132	1,838	0.128	29,214	0.147
Hispanic	28,498	0.204	1,387	0.240	1,838	0.258	29,214	0.186
Female	28,498	0.503	1,387	0.374	1,838	0.374	29,214	0.485
Male	28,498	0.497	1,387	0.626	1,838	0.626	29,214	0.515
Age	28,498	14.74	1,387	15.13	1,838	14.60	29,214	15.27
Estimated GPA	28,220	3.226	1,324	2.592	1,718	2.598	92	2.935
Private	28,475	0.0820	1,385	0.0686	1,833	0.0316	427	0.0656
Household Income Level	23,194	11.54	1,066	9.825	1,356	9.994	18,666	11.21
Parental Education Level	25,764	34.09	1,162	29.04	1,532	28.15	24,435	33.52
MSA Status of Residence	28,498	1.873	1,387	1.945	1,838	2.017	29,214	1.868

Table A.3: Expects to Graduate from Four-Year College: Raw Data and Missing Observations Descriptive Statistics by Response

Student Response	"Yes"		"No"		"I Don't Know"		Missing	
Expects to Graduate Four-Year College	N	mean	N	mean	N	mean	N	mean
Metal Detectors at School	25,490	0.101	1,256	0.0924	3,573	0.113	1,694	0.146
Locker Checks	24,464	0.526	1,215	0.597	3,439	0.549	1,602	0.527
Security Guards or Police	25,488	0.697	1,256	0.690	3,575	0.646	1,697	0.628
Locked Doors	25,490	0.663	1,256	0.629	3,576	0.612	1,691	0.636
Identification Badges Required	25,485	0.244	1,256	0.210	3,576	0.220	1,691	0.266
Surveillance Cameras	25,486	0.712	1,256	0.737	3,576	0.661	1,693	0.677
White	25,501	0.781	1,257	0.846	3,578	0.803	30,601	0.777
Black	25,501	0.131	1,257	0.0947	3,578	0.132	30,601	0.146
Hispanic	25,501	0.201	1,257	0.190	3,578	0.254	30,601	0.189
Female	25,501	0.513	1,257	0.383	3,578	0.406	30,601	0.480
Male	25,501	0.487	1,257	0.617	3,578	0.594	30,601	0.520
Age	25,501	14.70	1,257	15.72	3,578	14.63	30,601	15.26
Estimated GPA	25,267	3.276	1,228	2.674	3,443	2.735	1,416	2.619
Private	25,480	0.0875	1,257	0.0342	3,571	0.0353	1,812	0.0657
Household Income Level	20,849	11.66	1,013	10.54	2,689	10.23	19,731	11.13
Parental Education Level	23,195	34.53	1,070	29.77	3,044	29.26	25,584	33.31
MSA Status of Residence	25,501	1.857	1,257	2.018	3,578	2.011	30,601	1.871

Table A.4: Pooled School Crime Supplement 2005-2015 Sample Observations by Survey Year

Survey Year	N
2005	2494
2007	2265
2009	1742
2011	2114
2013	1855
2015	1714
Total	12184

Table A.5: National Crime Victimization School Crime Supplement: Reported Household Income Levels

Value	Label
1	Less than \$5,000
2	\$5,000 to \$7,499
3	\$7,500 to \$9,999
4	\$10,000 to \$12,499
5	\$12,500 to \$14,999
6	\$15,000 to \$17,499
7	\$17,500 to \$19,999
8	\$20,000 to \$24,999
9	\$25,000 to \$29,999
10	\$30,000 to \$34,999
11	\$35,000 to \$39,999
12	\$40,000 to \$49,999
13	\$50,000 to \$74,999
14	\$75,000 and over

Source: 2015 National Crime Victimization School Crime Supplement Codebook

Table A.6: National Crime Victimization School Crime Supplement: Parental Education Values

Value	Label
00	Never/Kindergarten
01-08	Elementary
09-12	High School
21-26	College
27	12th Grade (No Diploma)
28	High School Grad
40	Some College (No Degree)
41	Associate Degree
42	Bachelor Degree
43	Master Degree
44	Professional School Degree
45	Doctorate Degree

Source: 2015 National Crime Victimization School Crime Supplement Codebook

Table A.7: National Crime Victimization School Crime Supplement: Residence MSA Status Values

Value	Core-Based Statistical Area/Metropolitan Statistical Area Status of Residence
1	Central city of an (S)MSA
2	In (S)MSA but not central city
3	Not (S)MSA

Source: 2015 National Crime Victimization School Crime Supplement Codebook

Table A.8: Probit Average Marginal Effects Results Using Robust Standard Errors

VARIABLES	Expects to Graduate Four-Year College	Expect to Attend Any College/Technical School After HS
Metal Detectors at School	-0.023*** (0.005)	-0.024** (0.010)
Locker Checks	0.000 (0.004)	-0.005 (0.006)
Locked Doors	0.009** (0.004)	0.025*** (0.006)
Security Guards or Police	0.002 (0.005)	0.027*** (0.007)
Identification Badges Re- quired	0.002 (0.004)	0.012* (0.007)
Surveillance Cameras	0.016*** (0.004)	0.018** (0.007)
Private	0.031*** (0.010)	0.091*** (0.015)
Black	0.012** (0.006)	0.040*** (0.010)
Hispanic	0.001 (0.005)	0.026*** (0.009)
Male	-0.025*** (0.004)	-0.046*** (0.006)
Age	-0.001 (0.001)	-0.020*** (0.002)
Estimated GPA	0.037*** (0.002)	0.087*** (0.004)
Household Income Level	0.002*** (0.001)	0.007*** (0.001)
Parental Education Level	0.001*** (0.000)	0.003*** (0.000)
MSA Status of Residence	-0.013*** (0.003)	-0.035*** (0.005)
Observations	12,184	12,184

Robust standard errors in parentheses

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

Table A.9: Linear Probability vs. Logit Average Marginal Effects Results

VARIABLES	Attend Any College After HS		Graduate Four-Year College	
	Linear	Logit	Linear	Logit
Metal Detectors at School	-0.029*** (0.006)	-0.018*** (0.005)	-0.025** (0.010)	-0.023** (0.010)
Locker Checks	0.001 (0.004)	-0.000 (0.003)	-0.005 (0.006)	-0.005 (0.006)
Locked Doors	0.009** (0.004)	0.007** (0.003)	0.023*** (0.007)	0.021*** (0.006)
Security Guards or Police	0.002 (0.005)	0.002 (0.003)	0.027*** (0.008)	0.024*** (0.007)
Identification Badges	0.005 (0.004)	0.002 (0.003)	0.015** (0.007)	0.011* (0.006)
Surveillance Cameras	0.017*** (0.005)	0.012*** (0.004)	0.019** (0.007)	0.017** (0.007)
Private	0.015** (0.007)	0.018*** (0.004)	0.057*** (0.012)	0.066*** (0.008)
Black	0.018*** (0.006)	0.007** (0.003)	0.048*** (0.010)	0.032*** (0.007)
Hispanic	0.004 (0.005)	0.001 (0.003)	0.032*** (0.009)	0.023*** (0.007)
Male	-0.024*** (0.004)	-0.018*** (0.003)	-0.046*** (0.006)	-0.044*** (0.006)
Age	-0.000 (0.001)	-0.000 (0.001)	-0.019*** (0.002)	-0.018*** (0.002)
Estimated GPA	0.047*** (0.002)	0.024*** (0.001)	0.101*** (0.004)	0.077*** (0.003)
Household Income Level	0.003*** (0.001)	0.001*** (0.000)	0.008*** (0.001)	0.006*** (0.001)
Parental Education Level	0.001*** (0.000)	0.001*** (0.000)	0.003*** (0.000)	0.003*** (0.000)
MSA Status of Residence	-0.015*** (0.003)	-0.009*** (0.002)	-0.039*** (0.005)	-0.032*** (0.004)
Constant	0.740*** (0.028)		0.639*** (0.046)	
Observations	12,184	12,184	12,184	12,184
R-squared	0.059		0.112	

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A.10: Probit Average Marginal Effects by Race Groups

VARIABLES	Expects to Attend Any College			Expects to Graduate Four-Year College		
	Black	Hispanic	White	Black	Hispanic	White
Metal Detectors at School	-0.038*** (0.015)	-0.035** (0.016)	-0.021*** (0.007)	-0.057** (0.024)	-0.038* (0.023)	-0.023* (0.013)
Locker Checks	-0.017* (0.009)	-0.004 (0.010)	0.002 (0.003)	-0.014 (0.018)	-0.004 (0.016)	-0.003 (0.007)
Locked Doors	0.014 (0.011)	-0.017* (0.010)	0.005 (0.003)	0.056*** (0.022)	0.027 (0.017)	0.019*** (0.007)
Security Guards or Police	-0.013 (0.011)	0.024 (0.019)	0.003 (0.004)	0.052 (0.034)	-0.005 (0.024)	0.026*** (0.009)
Identification Badges Required	0.013 (0.009)	0.016 (0.010)	0.002 (0.004)	0.003 (0.018)	0.042*** (0.016)	0.021*** (0.007)
Surveillance Cameras	0.098*** (0.026)	-0.000 (0.012)	0.008** (0.004)	0.101*** (0.030)	-0.010 (0.018)	0.013 (0.008)
Private			0.018*** (0.005)	0.088*** (0.023)	0.093*** (0.026)	0.070*** (0.010)
Male	-0.016* (0.009)	-0.014 (0.010)	-0.020*** (0.003)	-0.056*** (0.018)	-0.041*** (0.015)	-0.045*** (0.007)
Age	-0.003 (0.004)	-0.004 (0.004)	0.000 (0.001)	-0.015** (0.007)	-0.022*** (0.006)	-0.019*** (0.003)
Estimated GPA	0.027*** (0.006)	0.046*** (0.006)	0.029*** (0.002)	0.072*** (0.011)	0.099*** (0.010)	0.086*** (0.004)
Household Income Level	0.001 (0.001)	0.001 (0.001)	0.002*** (0.001)	0.004* (0.002)	0.002 (0.002)	0.007*** (0.001)
Parental Education Level	0.001 (0.000)	0.001** (0.000)	0.001*** (0.000)	0.002** (0.001)	0.002*** (0.001)	0.003*** (0.000)
MSA Status of Residence	-0.015** (0.006)	-0.010 (0.008)	-0.009*** (0.003)	-0.023* (0.013)	-0.035*** (0.013)	-0.039*** (0.005)
Observations	1,295	2,095	9,832	1,374	2,224	9,832

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A.11: Probit Average Marginal Effects for Expect to Attend Any College After HS, by Race and Gender Groups

Expects to Attend Any College After HS	Black Male	Black Female	Hispanic Male	Hispanic Female	White Male	White Female
Metal Detectors at School	-0.037* (0.022)	-0.042** (0.017)	-0.036* (0.021)	-0.034* (0.018)	-0.027** (0.011)	-0.018** (0.007)
Locker Checks	-0.051** (0.021)	0.000 (0.014)	0.004 (0.017)	-0.012 (0.014)	0.004 (0.007)	0.002 (0.005)
Locked Doors	0.024 (0.021)	0.015 (0.017)	-0.035* (0.020)	-0.007 (0.015)	0.011 (0.007)	0.003 (0.005)
Security Guards or Police	-0.041 (0.034)	-0.001 (0.024)	0.030 (0.027)	0.024 (0.021)	0.003 (0.008)	0.006 (0.006)
Identification Badges Required	0.032 (0.019)	0.003 (0.015)	0.010 (0.018)	0.030* (0.016)	-0.005 (0.008)	0.011* (0.006)
Surveillance Cameras	0.118*** (0.023)	0.039** (0.019)	-0.020 (0.022)	0.015 (0.015)	0.007 (0.008)	0.013** (0.005)
Private					0.041** (0.019)	0.022* (0.013)
Age	0.003 (0.008)	-0.010* (0.006)	-0.003 (0.007)	-0.006 (0.006)	0.004 (0.003)	-0.002 (0.002)
Estimated GPA	0.054*** (0.012)	0.018* (0.010)	0.059*** (0.010)	0.049*** (0.009)	0.049*** (0.004)	0.028*** (0.003)
Household Income Level	0.002 (0.002)	0.001 (0.002)	0.001 (0.003)	0.001 (0.002)	0.003*** (0.001)	0.001* (0.001)
Parental Education Level	0.001 (0.001)	0.001 (0.001)	0.001* (0.001)	0.001* (0.001)	0.001*** (0.000)	0.001*** (0.000)
MSA Status of Residence	-0.015 (0.014)	-0.018* (0.010)	-0.015 (0.014)	-0.006 (0.011)	-0.025*** (0.006)	0.000 (0.004)
Observations	646	649	1,032	1,063	4,884	4,948

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A.12: Probit Average Marginal Effects for Expect to Graduate from a Four-Year College, by Race and Gender Groups

Expects to Graduate from Four-Year College	Black Male	Black Female	Hispanic Male	Hispanic Female	White Male	White Female
Metal Detectors at School	-0.081** (0.033)	-0.032 (0.025)	-0.043 (0.031)	-0.028 (0.027)	-0.015 (0.018)	-0.027* (0.015)
Locker Checks	-0.052* (0.030)	0.022 (0.023)	0.019 (0.024)	-0.029 (0.020)	0.006 (0.011)	-0.012 (0.009)
Locked Doors	0.060* (0.031)	0.042* (0.025)	0.024 (0.025)	0.025 (0.022)	0.001 (0.011)	0.034*** (0.009)
Security Guards or Police	0.021 (0.048)	0.066** (0.033)	0.001 (0.037)	-0.004 (0.032)	0.034*** (0.012)	0.020* (0.010)
Identification Badges Required	0.006 (0.029)	0.005 (0.023)	0.045* (0.024)	0.039* (0.021)	0.024* (0.012)	0.020* (0.011)
Surveillance Cameras	0.096*** (0.036)	0.070*** (0.027)	-0.041 (0.029)	0.018 (0.023)	-0.006 (0.013)	0.027*** (0.010)
Private	0.115 (0.087)	0.160* (0.089)	0.134* (0.071)	0.099 (0.069)	0.118*** (0.026)	0.062*** (0.021)
Age	-0.017 (0.011)	-0.015* (0.009)	-0.034*** (0.009)	-0.012 (0.008)	-0.018*** (0.004)	-0.021*** (0.003)
Estimated GPA	0.090*** (0.018)	0.054*** (0.014)	0.093*** (0.014)	0.106*** (0.012)	0.102*** (0.006)	0.073*** (0.005)
Household Income Level	0.003 (0.004)	0.006** (0.003)	0.003 (0.004)	0.001 (0.003)	0.009*** (0.002)	0.006*** (0.001)
Parental Education Level	0.001 (0.001)	0.002** (0.001)	0.003*** (0.001)	0.002** (0.001)	0.004*** (0.000)	0.002*** (0.000)
MSA Status of Residence	-0.052** (0.021)	0.002 (0.016)	-0.065*** (0.019)	-0.005 (0.017)	-0.062*** (0.009)	-0.019*** (0.007)
Observations	685	689	1,104	1,120	4,884	4,948

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

APPENDIX B

CHAPTER 3 THE MARK OF SCHOOL DISCIPLINE: APPENDIX OF ADDITIONAL TABLES AND RESULTS

Table B.1: Parent Reported Suspension in HS by Race and Gender

	Male	Female
Black	.26351351 444	.16964286 448
Hispanic	.17278287 654	.10832025 637
Asian	.04487179 312	.02588997 309
White	.16726137 2242	.07011236 2225
Other Groups	.21524664 446	.13089005 382

Table B.2: Descriptive Statistics of College Characteristics by Suspension

VARIABLES	Suspended in HS			Not Suspended in HS		
	N	mean	sd	N	mean	sd
Applied to College 2013	7,025	0.913	0.282	1,074	0.791	0.407
Accepted to First Choice College	3,316	0.747	0.435	224	0.665	0.473
First Choice College Public	3,444	0.655	0.475	246	0.711	0.454
First Choice Highly Selective	4,684	0.264	0.441	357	0.0672	0.251
First Choice Moderately Selective	4,684	0.314	0.464	357	0.143	0.350
First Choice Inclusive Four-Year	4,684	0.0858	0.280	357	0.101	0.302
First Choice Not Classified Four-Year	4,684	0.0628	0.243	357	0.0728	0.260
First Choice Two-Year	4,684	0.264	0.441	357	0.594	0.492
First Choice Less Than Two-Year	4,684	0.00961	0.0976	357	0.0224	0.148

Table B.3: Descriptive Statistics of Control Variables by Suspension

VARIABLES	Not Suspended		Suspended in HS		Missing/No Response	
	mean	N	mean	N	mean	N
Black	0.0995	7,025	0.180	1,074	0.101	15,404
Hispanic	0.158	7,025	0.169	1,074	0.167	15,404
White	0.560	7,025	0.494	1,074	0.551	15,404
Female	0.518	7,025	0.334	1,074	0.489	15,404
Male	0.482	7,025	0.666	1,074	0.511	15,404
Math Theta Score 2012	53.01	6,805	45.43	1,016	51.18	12,773
Total GPA 2013	2.925	6,662	1.975	1,018	2.668	14,196
Private School	0.176	7,025	0.0400	1,074	0.152	15,404
Taken AP Courses 2012	0.406	6,746	0.177	1,001	0.350	12,604
Taken SAT 2012	0.470	6,700	0.362	1,001	0.451	12,584
Number of Absences	1.453	6,718	1.902	996	1.537	12,595
Family Income 2012	4.888	7,025	3.425	1,074	4.594	12,820
Family SES Quintile 2012	3.337	7,025	2.547	1,074	3.235	12,820
Expects At Least Two-Year College	0.676	6,801	0.569	1,013	0.647	12,749
Expects At Least BA	0.624	6,801	0.466	1,013	0.589	12,749
Expects At Least MA	0.536	6,801	0.308	1,013	0.486	12,749
Expects At Least Doctoral/Professional	0.231	6,801	0.131	1,013	0.208	12,749
Family Income 2012	4.888	7,025	3.425	1,074	4.594	12,820
Family SES Quintile 2012	3.337	7,025	2.547	1,074	3.235	12,820
Parent 1 No HS	0.0692	5,734	0.126	708	0.0828	10,342
Parent 1 HS Only	0.369	5,734	0.494	708	0.419	10,342
Parent 1 Associates	0.149	5,734	0.162	708	0.154	10,342
Parent 1 BA	0.258	5,734	0.151	708	0.223	10,342
Parent 1 MA	0.113	5,734	0.0551	708	0.0898	10,342
Parent 1 Doctoral/Professional	0.0422	5,734	0.0113	708	0.0317	10,342
Parent 2 No HS	0.0869	4,617	0.158	476	0.105	8,072
Parent 2 HS Only	0.412	4,617	0.542	476	0.435	8,072
Parent 2 Associates	0.0959	5,734	0.0763	708	0.0959	10,342
Parent 2 BA	0.237	4,617	0.128	476	0.209	8,072
Parent 2 MA	0.0888	4,617	0.0420	476	0.0746	8,072
Parent 2 Doctoral/Professional	0.0565	4,617	0.0168	476	0.0538	8,072
Parent: Suspended pre-HS	0.0693	5,512	0.445	654	0.128	9,606
Student: In-School Suspension	0.0582	6,735	0.430	1,000	0.119	12,602
Student: Out-of-School Suspension	0.242	124	0.517	89	0.369	406
Student: Arrested in School	0.0403	124	0.144	90	0.131	405
Student: Expelled from School	0.0726	124	0.211	90	0.133	405
Any Reported Discipline	0.0572	7,025	1	1,074	0.101	15,404

Table B.4: Ordered Probit Predicted Probability of Expected Education by Suspension

Ordered Probit Predicted Probability of Expected Education by Suspension		
VARIABLES	(1) No HS Suspension	(2) HS Suspension
Less Than HS _predict	0.004** (0.002)	0.012** (0.005)
Complete HS/GED/Alternative HS_predict	0.081*** (0.007)	0.139*** (0.018)
Start Not Complete Certificate_predict	0.005*** (0.001)	0.008*** (0.002)
Complete Certificate_predict	0.046*** (0.006)	0.065*** (0.009)
Start Not Complete Associates_predict	0.009*** (0.003)	0.012*** (0.004)
Complete Associates_predict	0.087*** (0.007)	0.111*** (0.010)
Start Not Complete BA_predict	0.010*** (0.002)	0.012*** (0.003)
Complete BA_predict	0.308*** (0.012)	0.322*** (0.012)
Start Not Complete MA_predict	0.017*** (0.003)	0.015*** (0.002)
Complete MA_predict	0.246*** (0.011)	0.197*** (0.015)
Start Not Complete Doctoral/Professional_predict	0.014*** (0.004)	0.010*** (0.003)
Complete Doctoral/Professional_predict	0.172*** (0.010)	0.096*** (0.015)
Observations	5,138	5,138

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Table B.5: Probit Marginal Effects of Discipline for Applying to College for 2013

VARIABLES	Probit Marginal Effects for Applying to College for Fall 2013				
	(1) Suspended in HS	(2) In-School Suspension	(3) Out-of-School Suspension	(4) Ever Arrested	(5) Ever Expelled
Suspended in HS	-0.058** (0.026)				
In-School Suspension		0.017 (0.015)			
Out-of-School Suspension			-0.041 (0.112)		
Ever Arrested				0.247 (0.171)	
Ever Expelled					0.240 (0.210)
Female	0.038** (0.017)	0.052*** (0.010)	0.042 (0.135)	0.065 (0.129)	0.084 (0.137)
Black	0.089** (0.040)	0.084*** (0.027)	0.004 (0.299)	-0.003 (0.295)	-0.033 (0.294)
Hispanic	0.048 (0.030)	0.049** (0.023)	0.087 (0.204)	0.095 (0.195)	0.057 (0.208)
Asian	0.091 (0.073)	0.044 (0.048)	-0.280 (0.292)	-0.212 (0.295)	-0.251 (0.284)
White	0.004 (0.028)	-0.018 (0.020)	-0.174 (0.162)	-0.161 (0.150)	-0.192 (0.164)
Took SAT	0.017 (0.016)	0.028** (0.012)	0.032 (0.130)	0.040 (0.128)	0.051 (0.125)
Enrolled in AP Courses	0.055*** (0.018)	0.038*** (0.013)	0.085 (0.174)	0.070 (0.175)	0.050 (0.193)
Total GPA in 2013	0.072*** (0.013)	0.065*** (0.009)	-0.054 (0.066)	-0.029 (0.065)	-0.038 (0.065)
Math Aptitude Theta Score	0.002* (0.001)	0.003*** (0.001)	0.009 (0.007)	0.009 (0.007)	0.010 (0.007)
Number of Absences	0.003 (0.007)	-0.006 (0.005)	-0.001 (0.052)	-0.009 (0.051)	-0.009 (0.051)
Private School	0.056* (0.033)	0.092*** (0.030)	Omitted Omitted	Omitted Omitted	Omitted Omitted
Parent 1 Education in 2012	0.008 (0.006)	0.016*** (0.005)	0.021 (0.068)	0.028 (0.063)	0.032 (0.067)
Parent 2 Education in 2012	0.007 (0.007)	0.009** (0.005)	0.068 (0.053)	0.076 (0.048)	0.077 (0.055)
Household Income in 2012	0.008* (0.004)	0.005** (0.003)	-0.000 (0.040)	0.005 (0.034)	0.000 (0.039)
Household SES Quintile 2012	-0.011 (0.010)	-0.007 (0.007)	-0.063 (0.102)	-0.089 (0.095)	-0.083 (0.101)
Observations	5,643	14,625	328	328	328

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Table B.6: Probit Marginal Effects Estimates of Suspension on Applying to College by Race and Gender

VARIABLES	Probit Marginal Effects Estimates by Race and Gender							
	(1) Black Male	(2) Black Female	(3) Hispanic Male	(4) Hispanic Female	(5) White Male	(6) White Female	(7) Other Male	(8) Other Female
Suspend in HS	-0.047 (3.241)	-0.015 (5.307)	-0.207** (0.090)	-0.141 (0.177)	-0.041 (0.039)	-0.015 (0.033)	0.089 (0.171)	-0.095 (112.431)
Total GPA in 2013	0.041 (0.672)	0.078 (3.308)	0.090 (0.061)	0.011 (0.071)	0.101*** (0.022)	0.061*** (0.020)	0.032 (0.092)	0.165 (141.350)
Math Aptitude Theta Score	0.011 (0.116)	0.001 (0.321)	-0.002 (0.007)	0.003 (0.006)	0.000 (0.002)	0.004*** (0.001)	0.008 (0.008)	0.004 (7.618)
Number of Absences	-0.009 (0.199)	-0.004 (2.512)	-0.013 (0.035)	0.001 (0.028)	0.017 (0.014)	0.010 (0.010)	-0.069 (0.069)	0.005 (33.797)
Took SAT	0.254 (4.969)	-0.055 (6.957)	-0.068 (0.075)	0.043 (0.088)	0.045 (0.032)	0.005 (0.025)	-0.022 (0.116)	-0.020 (28.659)
Enrolled in AP Courses	0.047 (2.616)	0.093 (7.031)	0.040 (0.102)	0.069 (0.090)	0.043 (0.034)	0.050* (0.029)	0.301** (0.125)	0.038 (47.767)
Private School			0.011 (0.092)	0.182 (0.134)	0.037 (0.063)	0.018 (0.036)	0.196 (0.141)	
Parent 1 Education	-0.050 (0.396)	-0.004 (1.561)	0.035 (0.038)	-0.035 (0.042)	0.019* (0.011)	0.001 (0.009)	0.015 (0.049)	-0.001 (46.892)
Parent 2 Education	0.004 (0.618)	0.008 (3.832)	0.060 (0.048)	-0.046 (0.043)	0.013 (0.012)	0.006 (0.010)	-0.025 (0.055)	-0.004 (87.305)
Household Income in 2012	-0.039 (1.896)	-0.005 (1.158)	0.005 (0.023)	-0.002 (0.021)	0.012* (0.007)	0.008 (0.005)	0.078*** (0.028)	-0.031 (5.289)
Household SES Quintile 2012	0.072 (0.226)	0.002 (4.349)	-0.029 (0.067)	0.105 (0.065)	-0.022 (0.020)	-0.020 (0.015)	-0.112 (0.068)	0.033 (77.137)
Observations	196	205	457	422	1,628	1,628	292	230

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Table B.7: Probit Results Marginal Effects of Suspension on Acceptance to First Choice College Fall 2013

Probit Marginal Effects of Suspension on Acceptance to First Choice College Fall 2013	
VARIABLES	(1)
Suspended in HS	-0.010 (0.058)
First Choice College Selectivity (1-5)	0.084*** (0.018)
First Choice College Public	0.014 (0.040)
Female	0.022 (0.034)
Black	-0.010 (0.080)
Hispanic	0.017 (0.079)
Asian	-0.049 (0.067)
White	0.041 (0.062)
Private School for HS	0.050 (0.036)
Total GPA 2013	0.205*** (0.031)
Math Aptitude Theta Score 2012	-0.001 (0.003)
Number of Absences	-0.005 (0.015)
Student Took SAT 2012	0.040 (0.033)
Enrolled in AP Courses 2012	0.024 (0.036)
Parent 1 Education 2012	-0.010 (0.017)
Parent 2 Education 2012	-0.011 (0.014)
Household Income 2012	0.007 (0.006)
Household SES Quintile 2012	0.027 (0.027)
Observations	2,636

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

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