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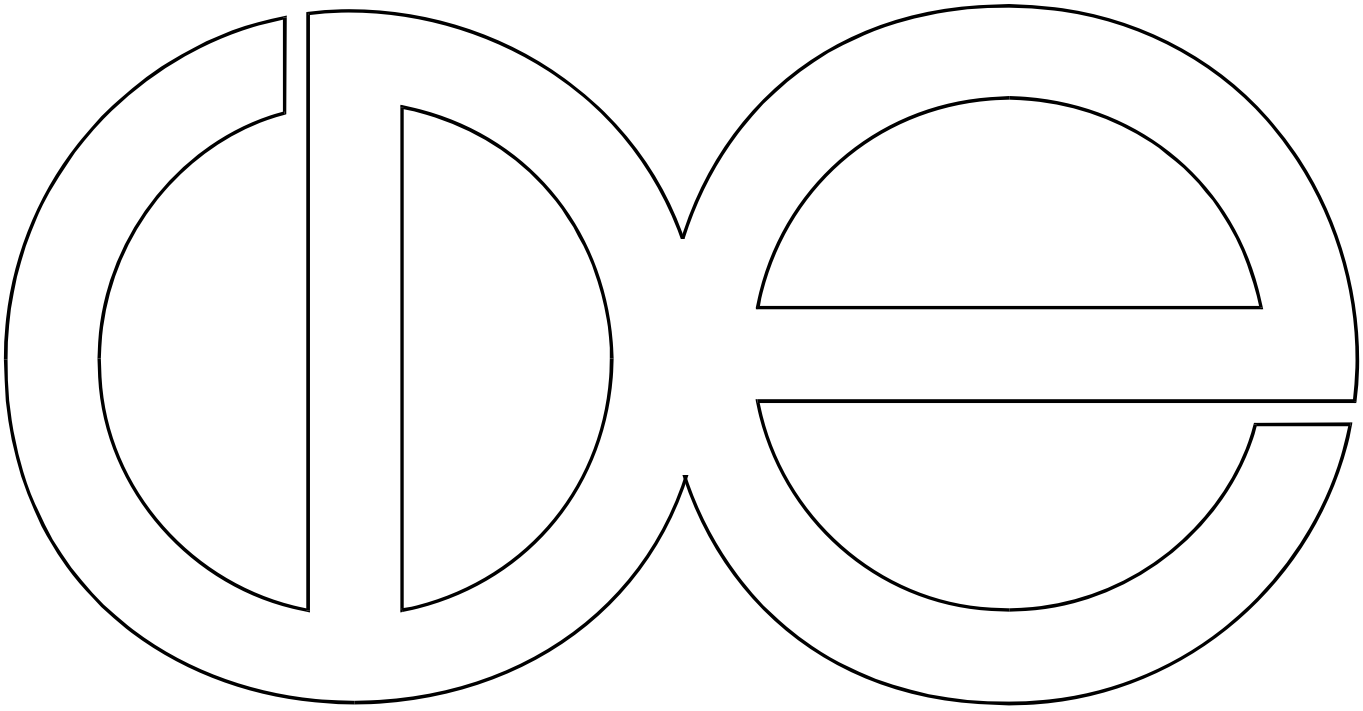

Racial Disparities in Student Loan Debt and the Reproduction of The Fragile Black Middle Class

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ABSTRACT

Policy makers and scholars express concern about rising levels of student debt in the U.S. But surprisingly little of this conversation recognizes that debt is racialized, and disproportionately impacts youth of color, especially black youth. In this study, we expand on recent research on racial disparities in student debt, and ask whether black-white disparities in debt persist, decline, or increase across the early adult life course, examine possible mechanisms for racial disparities in student debt across early adulthood, and ask whether racial disparities in student debt contribute to black-white wealth inequality among a recent cohort of college-going young adults. We address these questions using nationally representative data from the National Longitudinal Study of Youth-1997, multilevel growth curve models, and linear decomposition methods. We have three key findings. First, we find that black-white disparities in debt increase across the early adult life course, and that previous research underestimates racial disparities in debt. Second, this racial disparity is partially explained by differences in the social background, postsecondary experiences, and disparities in attained social and economic status of black and white young adults. Third, we find that—compositionally—racial inequalities in student debt account for a substantial minority of the black-white wealth gap in early adulthood, and that this contribution increases across the early adult life course. We conclude that debt trajectories are more informative than point-in-time estimates, and that student debt may be a new mechanism of inequality that creates fragility in the next generation of the black middle class.

INTRODUCTION

Rising student debt has generated substantial discussion among scholars, policy makers, and the public. The average debtor leaves school with over $30,000 in student debt, which is arguably the end result of skyrocketing costs, state defunding of higher institutions, flagging financial aid, and rising access to credit (Bound, Lovenheim and Turner 2007; Project on Student Debt 2011). To date, much of the scholarly discussion on debt has revolved around whether or not rising student debt constitutes a crisis (Akers and Chingos 2016), the institutional factors that influence debt (Looney and Yannelis 2015), and the impact of debt on young adult outcomes (Addo 2014; Dwyer, McCloud and Hodson 2011; Dwyer, McCloud and Hodson 2012).

Less discussed is that the burden of rising debt is racialized, and is disproportionately shouldered by students of color and particularly black youth. Previous research that relies on cross-sectional estimates of debt reveals that black youth report more debt, higher default rates, and more difficulty repaying debt than their white counterparts (Cunningham and Santiago 2008; Houle 2014a; Jackson and Reynolds 2013). At the same time, racial disparities in economic outcomes, and particularly wealth are largest among the college educated (Emmons and Noeth 2015). That college-educated blacks have more debt, but may not reap similar economic benefits of a college degree as their white counterparts, raises important questions about whether rising debt may be contributing to the economic fragility of the black middle class and racial inequality among college educated populations more generally (Addo, Houle and Simon 2016; Seamster and Charron-Chénier 2017). Current knowledge on this topic is based on cross-sectional studies that do not track debt burdens over time. Thus, our understanding of how racial disparities in debt play out across the early adult life course, and its consequences for racial inequality among college-going populations, is limited.

In this paper, we have three research aims. First, we theorize that racial disparities in student debt are a function of racialized economic hardship and discrimination across the life course and ask if black-white disparities in debt increase, decrease, or persist over the early adult life course as youth enter adulthood and begin to repay or continue to accumulate debt. Second, we examine the factors that contribute to black-white differences in debt trajectories over time. Finally, we address recent claims that student debt may be a new mechanism by which racial economic inequalities are perpetuated across generations, and ask if racial disparities in debt are linked with racial disparities in wealth over the early adult life course. Although our study is descriptive, our findings contribute to understanding how existing mechanisms of racial inequality are creating new dynamics that uphold and reproduce racial inequality among college educated populations.

Black-White Disparities in Student Debt in an Era of Rising College Costs

In the late 20th and 21st century U.S., a college degree remains a near requirement for access to (relatively) high paying and prestigious middle class jobs (Hout 2012). The payoff to a college degree, however, remains racialized. A wealth of research has shown that the social and economic benefits to a college degree are primarily enjoyed by whites (Gaddis 2015; Hamilton, Darity, Price et al. 2015; Jones and Schmitt 2014; Shapiro, Meschede and Osoro 2013) and that racial disparities in economic outcomes are highest among the college educated middle class (Emmons and Noeth 2015). Indeed, race scholars argue that higher education does little to reduce racial inequality, and these racialized processes help create a "fragile black middle class", whereby the black college-educated middle class are more socially and economically fragile and at risk for downward mobility than whites (Landry and Marsh 2011; Wilson 2007).

Missing from this literature on the differential benefits of college by race is the potential

importance of racial differences in the *costs* and financial risks of college-going. In an era of rising college costs and flagging financial aid, black families and students have turned to student loans to bridge the widening gap between family resources and college costs. While these loans may help black youth gain access to college, student loans are an imperfect tool for college accessibility and create new financial risks for young people in the pursuit of a college degree (Jackson and Reynolds 2013). Point-in-time estimates of debt show that black young adults have significantly higher debt burdens than whites (Cunningham and Santiago 2008; Houle 2014a; Jackson and Reynolds 2013), such that blacks are both more likely to borrow, and owe $5,000 to $10,000 more than white debtors (Houle 2014a; Huelsman 2015; Jackson and Reynolds 2013). Indeed, racial disparities in debt are substantially larger than (and independent of) disparities by gender, socioeconomic background, and college preparation (Addo et al. 2016; Houle 2014a)[1]. In addition to having more debt, debt is more burdensome for black youth to repay. Black young adults are more likely to default on their loans than white young adults after leaving college (Gross, Cekic, Hossler et al. 2009; Huelsman 2015), and report greater concern about the affordability of student loan payments (Ratcliffe and McKernan 2013). More recently, scholars have argued that racial disparities in debt are a form of "predatory inclusion" (Seamster and Charron-Chénier 2017) for youth of color. That is, over the past several decades, black youth have gained greater access to postsecondary institutions, but they have made these gains on exploitative terms—terms that thrust black youth deep into the red relative to whites.

In this paper, we build on the nascent literature surrounding race and student debt, and seek to understand why there are stark racial disparities in student debt, and its consequences for black-white wealth inequality among "middle class" college educated populations. We argue that racial disparities in debt reflect processes of racialized economic hardship and discrimination that

accumulate across the life course for recent cohorts of young adults. Specifically, that existing and historical processes of racial stratification and exclusion compound across the life course to create these (new) inequalities in debt and debt burden. Key mechanisms include early life (parents') social and economic status; as well as discrimination and hardship in credit markets, postsecondary institutions, and the labor market in young adulthood.

Early Life and Intergenerational Roots of Student Debt

In early life, racial disparities in family social and economic background play a role in racial disparities in student debt. Racial disparities in family socioeconomic status—in education, income, and importantly wealth—are large and persistent (Killewald 2013; Oliver and Shapiro 2006). Parents' social and economic resources are key determinants of their adult children's college success, as parents use their financial and knowledge resources to help their children navigate postsecondary institutions (Goldrick-Rab and Pfeffer 2009; McCabe and Jackson 2016), contribute money to college expenses (Choy and Berker 2003; Grodsky and Jones 2007; Schoeni and Ross 2005; Steelman and Powell 1991), and take on debt in lieu of their children (Cha, Weagley and Reynolds 2005). The upshot is that young adults from more socioeconomically advantaged backgrounds—by wealth, income, and education—leave college with less debt than their counterparts who are from socially disadvantaged backgrounds (Addo et al. 2016; Houle 2014a). Family wealth is a particularly important resource that drives racial disparities in debt because financial aid decisions are based on income rather than wealth. Given that the average net wealth of college educated blacks is less than one tenth that of whites (Emmons and Noeth 2015), white families are more able to draw from their wealth (in the form of liquid assets or home equity loans) to pay for college, transfer their wealth to their children, and protect their children from debt than are black families (Addo et al. 2016; Krivo and Kaufman 2004;

McKernan, Ratcliffe, Simms et al. 2014).

Point of Sale: The Role of the College Experience

Also important are racial inequalities that emerge when young people borrow for college. Although student debt is used by black students to bridge the gap between family resources and the rising costs of college, black youth are more likely to have private loans, which carry high and variable interest rates, have high fees for deferment and forbearance, and offer few protections for borrowers (Goldrick-Rab, Kelchen and Houle 2014; Project on Student Debt 2014). Indeed, some have argued that the student loan market is not unlike the mortgage market, where blacks lack access to fair credit, and are disproportionately steered toward predatory, high interest loans that are difficult to repay (Seamster and Charron-Chénier 2017; Williams, Nesiba and McConnell 2005).

Black youth also face discrimination and hardship in postsecondary institutions as students that lead to debt accumulation and debt burden. For example, black young adults are often funneled toward or have access limited to predatory for-profit institutions and underfunded schools, which are associated with high levels of debt accumulation (Cottom 2017; Goldrick-Rab et al. 2014). These institutions also offer fewer labor market benefits and have high drop-out rates (Cellini and Chaudhary 2014), which increases default risk and makes this debt more difficult to repay.

Life After College: Social and Economic Inequalities and the Burden of Repayment

As young adults, black youth also experience hardship and discrimination in the labor market that makes debt more burdensome to repay. Experimental research shows that, even among college graduates, black youth are less likely to obtain job offers, and receive offers for lower paying positions with fewer options for career advancements than white college graduates

(Gaddis 2015). More broadly, black-white disparities in earnings, employment, and wealth are observable in young adulthood (Cancio, Evans and Maume 1996; Zhang 2008), and due to their precarious economic position black youth may have more difficulty paying down student debt at the same rate as white youth after leaving college.

Racial disparities in the transition to adulthood, more broadly, may also contribute to growing disparities in student debt across the life course. Schneider (2011), for example, shows that black young adults are less likely to be married than white young adults, and that this is in part a function of the racial wealth gap. While wealth (and debt) may influence racial inequalities in the timing of first marriage, it may also be that the economic security of marriage makes it easier for youth to repay debt (Dew 2008; Dew 2011).

Taken together, we argue that these racialized life course processes accumulate over time to lead black youth to shoulder disproportionately more debt that is harder to repay than their white counterparts. Previous research that examines point-in-time estimates of racial disparities in debt supports this assertion, and shows that at age 25, approximately a third of the racial debt disparity can be explained by racial socioeconomic and wealth inequalities in the parents' generation; an additional 30% can be explained by postsecondary educational differences—particularly for profit attendance and attending underfunded institutions that provide less aid; and 12% of the racial debt disparity can be explained by young adults' ability to repay in young adulthood, as proxied by their social and economic attainment (e.g., income, employment status) (Addo et al. 2016; Goldrick-Rab et al. 2014). However, little is known about how racial disparities in debt evolve across the early adult life course.

The Racial Wealth Gap and Student Debt

The above research suggests that student debt is uniquely racialized, and raises questions about whether racial disparities in debt may contribute to racial inequalities among college-educated populations. Recently, scholars have hypothesized that disparities in debt may contribute to or reproduce long-standing racial inequalities in wealth (Addo et al. 2016; Scott-Clayton and Li 2016; Seamster and Charron-Chénier 2017), particularly among middle-class, college educated populations. This hypothesis has been motivated by two primary observations: first, the racial wealth gap and racial student debt gap are correlated, and these gaps have increased in recent years (Goldrick-Rab et al. 2014; Seamster and Charron-Chénier 2017). Second, student debt may inhibit wealth acquisition and in turn exacerbate racial disparities in wealth.

Prior to the recession, median white household net wealth was around eight times greater than the median black household. After the recession, median white net wealth was thirteen times that of blacks (Kochnar and Fry 2014), which can be partly attributed to the disproportionate impact of the great recession on black families coupled with the uneven economic recovery that benefited whites more than blacks (Pfeffer, Danzinger and Schoeni 2013). Racial disparities in debt have also increased in recent decades, particularly among those with college educations. Using repeated cross-sectional data, Seamster and Charron Chénier (2017) show that the percent of black households with student debt, and the average debt among black households have increased relative to whites in the past two decades, and these increases cannot be explained by changes in college attendance by race. The correlation between these two trends have led some scholars to suggest that debt may be reproducing or exacerbating racial inequalities in wealth (Seamster and Charron-Chénier 2017).

Racial disparities in debt may also be linked to racial wealth disparities if student debt inhibits wealth acquisition (Houle and Berger 2015; Zhan, Xiang and Elliott 2016). For example, if black young adults are struggling to pay down debt more than whites, this may prevent these youth from building up their checking account, or purchasing homes. In addition, those with high debt burdens may delay marriage and fertility (Addo 2014; Nau, Dwyer and Hodson 2015), and such delays in the transition to adulthood may impede wealth acquisition in young adulthood (Houle 2014b). Recent research has supported this notion, finding that the deleterious impact of student debt on social and economic outcomes for young adults are stronger for black youth than white youth (Houle and Warner 2017; Walsemann, Ailshire and Gee 2016). More directly, racial disparities in debt may contribute to racial wealth inequality because if black youth have more debts and fewer assets, mechanically this would increase racial disparities in wealth, as net wealth is the simple difference between assets and debts. Despite these claims, there has been no systematic examination of the hypothesis that racial inequalities in debt may reproduce or exacerbate racial wealth inequalities.

The Current Study

Prior research on racial disparities in student debt estimates black-white differences in debt at a single point in time. As such, processes by which debt is accumulated or repaid are not understood, along with the long- and short-term consequences of student debt for racial inequality among the middle class. We argue that this has important methodological and theoretical consequences that limit our understanding of racial disparities in debt.

First, absolute levels of student debt assessed at a single time point are a poor proxy for debt burden (Dynarski 2015; Looney and Yannelis 2015). Borrowers with the most debt often attend the most expensive, private institutions that provide the greatest labor market benefits

(Gladieux and Perna 2005), but have less difficulty paying down that debt than those with lower debt levels. In the absence of default data—which are typically only available in administrative aggregate data—trajectories of loan repayment over time may provide a better measure of debt burden than point-in-time estimates of student debt. Indeed, recent estimates show that less than half (47%) of borrowers in repayment have paid at least one dollar towards their principal five years into repayment (US Department of Education 2017). This suggests that most young adults are either maintaining debt levels well into their post-college careers, or are accumulating debt though interest and fees, but little is known about variation in these trajectories by race. In fact, scholars increasingly argue that the U.S. does not have a student loan crisis, but rather student loan repayment crisis (Dynarski 2015; Looney and Yannelis 2015).

Second, point-in-time measures of debt do not match our theories or language surrounding debt. Though social scientists have suggested that social inequalities in debt are a function of processes that play out across the life course, cross-sectional or point-in-time debt estimates do not adequately reflect these life course processes. For example, prior research suggests social inequalities by family background reflect parents' ability to protect their children from accumulating debt (Houle 2014a). However, these resources may also help young adults pay down existing debt in young adulthood. By examining these trajectories over time, we can better disentangle the extent to which these life course factors predict both accumulation in college (debt at baseline) and debt burden across the early adult life course (debt trajectory).

Third, understanding the consequences and scope of student debt for racial inequalities requires that we follow young people as they age. For example, because most of our estimates of student debt are from the early adult years, we may be underestimating racial disparities in debt if disparities are increasing across the life course. It is also difficult to assess the consequences of

racial disparities in debt unless we follow youth through their early adult life course (Scott-Clayton and Li 2016). Taken together, following young people over time as they leave school, enter the labor market, and find their social and economic footing—is essential to understanding the dynamics of racial disparities in debt and its consequences in young adulthood.

In sum, we aim to make three contributions to the growing literature on race and student debt. First, we ask whether racial disparities in debt change as young adults move through young adulthood. If black young adults are struggling with repayment, and facing lower wages and higher rates of unemployment, racial disparities in student debt may increase as young people age. Second, drawing prior research and theory, we ask if racial inequalities at different stages of the life course—social origins, postsecondary experiences, and young adult attainment—help explain why racial gaps in student debt persist, increase, or diminish across young adulthood. Third, we ask to what extent racial disparities in student debt are linked with black-white disparities in wealth among the current generation of young adults.

DATA AND METHODS

Data

Data are drawn from the National Longitudinal Study of Youth 1997 Cohort (NLSY-97). The NLSY-97 is a nationally representative sample of 8,984 respondents born between 1980 and 1984. Survey respondents have been interviewed yearly since the original round of data collection in 1997 except for a two-year gap between the 2011 and 2013 waves. The NLSY-97 data are particularly well-suited for our analyses in that the panel follows a recent cohort of youth that hold historically high levels of student debt during their transition into adulthood. We limit our analysis to respondents who ever attended college, and thus were at risk to accumulate

student debt (N=5,688), and restructure the data into a person-wave format (Person-Waves=91,008). We then drop all person-wave observations before the YAST-20 module is completed, so that our sample is limited to the years after which respondents have first reported debt (N=5,688, Person-Waves=62,545). We then drop all observations before respondents are enrolled in college, such that all respondents enter the data after they have attended college for the first time[2] (N=5,687, Person-Waves=56,706). We then drop all observations with missing data on study variables (N=4,060 Person-Waves=34,149)[3].

Measures

Student debt. Our focal dependent variable in most analyses is student debt, measured at three points during the early adult life course. Respondents were asked questions about types and amounts of debt holdings and assets, including student debt, at approximately age 20, 25, and 30 as part of the NLSY debts and assets modules (YAST). We adjusted debt for inflation and standardized it to reflect 2010 dollars using the Consumer Price Index Research Series (CPI-U-RS) (Bureau of Labor Statistics 2010). While accuracy of self-reported debt data is a concern, borrower self-reports and credit reports are extremely similar for student debt (Brown, Haughwout, Lee et al. 2011). We use linear interpolation to impute debt between YAST modules[4], and include the natural log of this measure in our empirical models[5].

Young Adult Wealth. Net wealth is measured as the total sum of assets less debts, measured at the YAST20, YAST25, and YAST30 survey, in inflation adjusted 2010 dollars. We use linear interpolation to impute net wealth across YAST surveys, and use the Inverse Hyperbolic Sine (IHS) transformation (Friedline, Masa and Chowa 2015). Unlike a log transformation, the IHS transformation allows for zero and negative values.

Family Background. We measure family background characteristics with time-invariant measures from the baseline (1997) survey. These measures include: race (white [referent] black, and other); parents' highest education in 1997 (<= high school degree [referent], some college, 4-year college degree or higher); parental wealth (in constant 2010 dollars, Inverse Hyperbolic Sine transformation); parents' income (logged) number of siblings in household; family structure (two parent biological [referent], single parent, step family, other family structure); sex (female [referent], male); and region of residence (northeast [referent], northcentral, south, west).

Youth Postsecondary Educational Characteristics. Time-varying variables that reflect annual measures of respondents' cumulative postsecondary educational experiences include highest degree pursued and attained (four year institution, degree attained [referent], four year institution no degree, two year institution with degree attained, two year institution no degree attained, graduate school degree attained, graduate school no degree attained), number of years enrolled, the number of enrollment spells (number of times respondent unenrolled and enrolled in PSE), proportion years enrolled full-time, current enrollment status, percent of years enrolled in a private institution, sticker price of institutions attended over the PSE career (logged), a proxy for the level of generosity of institutions attended (total aid-to-cost ratio) and a dummy indicator of whether the respondent ever attended a for-profit institution.

Young Adult Social and Economic Status: Time-varying measures that reflect young adults' status include: age, marital status (never married [referent], married, divorced or separated); parental status (1=respondent has a child)); whether respondents live with their parents (1=respondent lives with parents); full-time employment (1=yes); wages (measured in 2010 dollars and transformed using a natural logarithm); home ownership (1=yes), financial assets (logged, in constant 2010 dollars), and unsecured debt (logged, in constant 2010 dollars).

Analysis Strategy

Our analysis unfolds in two stages. First, we estimate differences in student debt by race, and track how this disparity changes across the early adult life course. Second, we ask to what extent racial differences in student debt contribute to or explain racial disparities in wealth across the early adult life course.

In the first analysis stage, we estimate a series of hierarchical linear growth curve models (Raudenbush and Bryk 1992) to estimate racial disparities in debt at baseline (intercept), and ask to what extent these disparities change over time (slope). Our measure of time is time since first enrollment, to account for differences in age at first enrollment[6]. These models allow us to simultaneously estimate initial differences (intercepts) in student debt (at the age 20 YAST module), as well as differences in trajectories in student debt over time that are associated with race. The models took the form:

$$Y_{ti} = P_{0i} + P_{1i}TIME_{ti} + E_{ti} \quad (1)$$

Where the student debt outcome (Y) reported by the respondent *i* at interview *t* is estimated as a function of the initial level of debt at the YAST 20 module (P_{0i}), a slope that varies as a linear function of time (P_{1i}) and an individual error term (E_{ti}). Equation (1) can be reduced to :

$$P_{0i} = B_{00} + B_{01}BLACK_{0i} + B_{02}COVS_{0i} + E_{0i} \quad (1a)$$

$$P_{1i} = B_{t0} + B_{t1}BLACK_{0i} + B_{t2}SCOVS_{0i} + E_{1i} \quad (1b)$$

Where student debt (P_{0i}) is predicted as a function of race ($BLACK_{0i}$), covariates (COVS) and a random error term (E_{0i}). We allow the slope of debt (P_{1i}) to vary as a function of race ($BLACK_{0i}$) and covariates (SCOVS), and a random error term (E_{1i}). This framework allows us to examine several features of debt accrual over time, including 1) racial disparities in student debt; 2) how trajectories of student debt vary over time as a function of race; 3) the extent to which racial

differences in debt trajectories are explained by (or are a function of) family background characteristics, youth postsecondary experiences, and young adult socioeconomic status. This final step was achieved by allowing the slope of debt to vary by family background, postsecondary characteristics, and young adult characteristics (SCOVS), and examining to what extent these characteristics explained race differences in debt trajectories.

In the second analysis stage, we employ a regression decomposition analysis. This is a common method used to explain racial wealth disparities (Blau and Graham 1990). We use the "means-coefficient" method outlined by Blinder (1973) and Oaxaca (1973). This approach is useful for two reasons. One, we can quantify the contribution of individual characteristics (i.e., student debt) to the racial wealth gap, and two, it allows us to answer the counterfactual question "how would the wealth gap change had the relationship between the demographic and socioeconomic characteristics and the wealth levels of Black young adults been the same as White youth, and vice versa?"

RESULTS

We present descriptive statistics for the full sample and black-white comparisons in Table 1. Average student debt among debtors in this sample is $17,570. While this figure is lower than the national average, this is because it represents average debt for all person-years since the respondent becomes residentially independent. For comparison, average debt among debtors is $12,777 at YAST-20, $22,358 at YAST-25, and $25,397 at YAST-30, which is consistent with national estimates (Houle 2014a). Supporting prior research, we find that black young adults are both more likely to have debt and have higher levels of (logged) debt than their white counterparts. Moreover, there are also significant black-white differences in family background, postsecondary college experiences, and young adult social and economic status. Black young

adults are more likely to come from disadvantaged backgrounds, are more likely to have left college without getting a degree and attend for-profit institutions, and have significantly lower social and economic well-being in young adulthood. While these patterns are well-known, such differences may play a role in racial differences in student debt over time.

[Table 1 About Here]

Do Trajectories of Debt Vary By Race?

In Table 2, we present results from growth curve models that estimate racial disparities in (logged) debt and how these disparities change over time. Model 1 shows the coefficient for the racial disparity in debt at baseline (intercept), the racial disparity in debt over time (slope), the time coefficient (year—interpreted as the change in debt for whites), and intercept controls for family background, postsecondary educational characteristics, and young adult social and economic characteristics. Models 2-4 add slope terms (time*covariate interactions) for family background (model 2), postsecondary characteristics (model 3) and young adult socioeconomic characteristics (model 4).

[Table 2 About Here]

Across these models, we point to four key findings. First, supporting prior research, we find that at baseline (intercept) race is significantly associated with debt levels, such that black youth report 83.3% [$e^{.606}$] more debt than their white counterparts, after adjusting for family background and postsecondary characteristics. Second, we find that these racial differences in debt at baseline grow over time. After adjusting for all intercept controls (Model 1), the black-white disparity in debt grows by about 6.8% annually. That is, black youth start their young adult careers with more debt than whites, and this disparity grows over time. To demonstrate the magnitude of this growing disparity in debt: While blacks hold 83.3% more debt at baseline than

whites, fifteen years later we would predict that this disparity to have increased to approximately 185.3%. In other words, racial disparities in debt are large, and more than double across the course of young adulthood.

Third, we find that racial differences in family background, postsecondary experiences, and young adult social and economic factors (that is, allowing the slope of debt to vary as a function of these variables) partially explain the slope coefficient for race. That is 47% of the growing racial disparity in debt across the early adult years is explained by these characteristics (.035[model 4] - .066[model 1])/.066). Fourth, we find that debt tends to decline (for whites) across the early adult life course, as noted by the negative coefficient for time. Taken together, these results suggest that whites are paying down their student debt, but that black young adults are doing so at a much slower rate.

Importantly, our results reveal the differential role of these life course characteristics in producing racial inequalities in debt at baseline (intercept) and trajectories over time. Notably, family background characteristics mediate a large portion of racial differences in debt at baseline, but play only a small role in explaining growth in the disparity over time (slope). Conversely, youth socioeconomic characteristics play a larger role in explaining the racial difference over time (slope). This suggests, that social background and college characteristics play a relatively larger role in debt accumulation, and youth's socioeconomic status plays a larger role in the ability to repay that debt. Additional models, not shown, also reveal stark racial disparities in debt-to-asset ratios that also increase over time. That is, not only do black young adults have more debt than whites, but debt as a proportion of assets is also considerably higher.

Do Racial Disparities in Student debt Contribute to Racial Disparities in Wealth?

To address this question, we present results from a linear decomposition of the racial wealth gap in Table 3.[7]

[Table 3 About Here]

As shown in Table 3, the average young adult racial wealth gap is $56,326[8]. For this recent cohort of young adults, both black and white, wealth levels are quite responsive to the observable characteristics we include in our model, explaining 92% of the wealth differential. This exercise suggests that if black young adults had the same composition of characteristics as their white counterparts (based on the variables we include in the decomposition), they would have 92% of the average wealth of whites.

When we disaggregate the explained portion of the wealth gap, we find that 10.4% of the racial wealth gap is explained by differences in student loans for the young adults in our sample. Alternatively stated, black young adults held 10.4% less wealth than their white counterparts due to differences in their student loans. Educational differences explain about 14% of the wealth differential, while racial disparities related to young adult social roles, i.e. marital status, parental status, and whether they live with parent, account for additional 36% of the wealth gap.

The above results suggests that student debt contributes to a substantial minority of the racial wealth gap among a contemporary cohort of college attending youth; but does the contribution of debt increase over time? To address this question, we present results from a linear decomposition models stratified by YAST modules conducted when respondents are (approximately) age 25 and 30 in Table 5[9].

[Table 4 About Here]

Two key findings emerge from Table 4. First, we find that the racial wealth gap nearly triples between the YAST25 and YAST 30 modules, supporting previous research (Oliver and

Shapiro 2001), While white young adults accumulate a wealth over this time period (their wealth doubles), black youth experience negligible wealth gains. Second, we find that the contribution of student debt to the racial wealth gap increases over time, from 13% at the YAST 25 module, to 23% at the YAST 30 module.

DISCUSSION

Policy makers, stakeholders, and scholars have long expressed concern about rising levels of student debt in the U.S. But surprisingly little of this conversation recognizes that rising student debt is racialized. In this study, we expand on recent research on racial disparities in student debt, and ask the extent to which black-white disparities in debt persist, decline, or increase across the early adult life course, examine possible mechanisms for racial disparities in trajectories of student debt, and ask whether the racial disparity in student debt is contributing to black-white wealth inequality among a recent cohort of college-going young adults. We have three key findings. First, we find that this racial disparity not only persists, but increases across the early adult life course, from around the early twenties to mid-thirties. Second, this racial disparity is partially explained by differences in the social background, postsecondary experiences, and young adult social and economic status of black and white youth. Third, we find that—compositionally—racial inequalities in student debt account for a substantial minority of the black-white wealth gap in early adulthood, and that the contribution of student debt to racial inequalities in wealth increase across the early adult years. That is, to the extent that student debt is a crisis, it may be more of a crisis for black youth, which may have consequences for the next generation of the black middle class.

Our findings both support and extend prior research on racial disparities in student debt in young adulthood. Previous research has relied on cross-sectional snapshots of student debt and

suggested that racial disparities in debt and debt burden are wide. Our study builds on this work and shows that this gap is smaller when young adults leave college, but grows substantially over the early adult life course. While the magnitude of the growth in the racial debt disparity is quite large, our findings are supported by recent descriptive evidence that also suggests that racial disparities in debt (among college graduates) increases in the years following graduation (Scott-Clayton and Li 2016). We theorize that racial disparities in debt are a function of hardship and discrimination experienced at different stages of the life course—family resources when young, postsecondary experiences and credit market access as students, and social and financial success as young adults. Indeed, our proxies for these measures explain some, but not all, of racial disparities in debt over time, suggesting that unmeasured factors—perhaps discrimination in credit markets, or perhaps the opportunities available in the neighborhoods that young people reside in (Pattillo 1999)—are important drivers of racial inequalities in debt across the early adult life course.

If racial disparities in debt are wide and increasing over time, are there consequences for racial inequality? The results from our decomposition analyses suggest that these racial disparities in debt and debt burden are wide enough to constitute a significant minority of the racial gap in wealth among the current cohort of college going youth. Our estimates suggest that if black young adults had equivalent student debt levels to white young adults, that the racial wealth gap in young adulthood would be reduced by around ten percent. As such, our evidence provides at least some support for recent claims that student debt may be a mechanism by which racial gaps in wealth are reproduced in the latest generation of young people. However, it is important to note that our decomposition analysis only speaks to how racial differences in the composition of their balance sheet (and student debt) explains racial differences in net wealth.

That is, one could reasonably hypothesize that student debt could affect net wealth in two ways. First, it could do so compositionally—dragging down net wealth mechanically by adding to the negative side of the balance sheet (which is what we examine in our decomposition analysis). Second, student debt could prevent asset acquisition. Repaying student debt could prevent youth from saving, and high debt loads could conceivably prevent youth from buying homes. To better examine this second pathway, we conducted alternative analyses on a measure of net wealth that did not include student debt. Interestingly, in these analyses student debt contributed virtually nothing to the racial wealth gap. This supports recent research that suggests that student debt has small to null effects on the probability of home ownership (Houle and Berger 2015). To the extent that student debt is affecting the racial wealth gap, its impact appears to be driven by its contribution to the composition of net wealth, rather than causal effects of debt on asset acquisition.

Our findings, coupled with recent research, provide suggestive evidence for how racial disparities in indebtedness may have implications for the next generation of the black middle class. Recent research on indebtedness has emphasized that rising debt burdens has made the middle class—writ large—economically fragile (Leicht and Fitzgerald 2007; Sullivan, Warren and Westbrook 2000). However, race scholars have long noted that the black middle class is uniquely fragile—that is, blacks are not only less likely than whites to attain middle class status, but their position is far more precarious once they achieve that status (Landry and Marsh 2011; Pattillo 1999), which is in part a function of racial disparities in wealth that are a legacy of slavery and Jim Crow legislation in the United States (Conley 1999; Oliver and Shapiro 2006). Our study provides an important bridge to these two literatures, and suggests that racial inequalities in student debt may contribute to the fragility of the next generation of the black

middle class That is, while blacks benefit socially and economically from postsecondary education, in an era of high debt and rising costs, they fall further behind whites in its pursuit—an example of *predatory inclusion* (Seamster and Charron-Chénier 2017). In sum, postsecondary education comes with the expectation of breaking the link between parents' resources and their adult children's attainment (Hout 2012); but debt may thwart this potential more for black young adults. Future research should continue to explore how debt may impact racial inequalities across the life course.

Our study is also the first to our knowledge to examine trajectories in debt as they evolve over time, thus providing new information regarding the association between dimensions of inequality and processes of debt accumulation and repayment. Social scientists who study debt often rely on point-in-time estimates of absolute debt levels, which are poor proxies of debt burden. We argue that, in the absence of student debt default data (which is generally only available in aggregate, administrative data), examining trajectories over time provides a better measure of debt burden and repayment difficulties than point-in-time estimates. Thus, by modeling debt trajectories—rather than estimating point-in-time differences—we better measure debt burden and enrich our understanding of the linkages between social inequality and debt accumulation and repayment. Future research might also examine how trajectories of debt are linked to young adult social and economic outcomes to better understand the consequences of student debt, especially in light of mixed and sometimes contradictory findings (Addo 2014; Dwyer et al. 2011; Houle and Berger 2015; Houle and Warner 2017; Nau et al. 2015).

This is the first study to our knowledge to examine how the racial gap in student debt changes over time, and the extent to which this gap contributes to racial disparities in wealth, but it is not without limitations. One key limitation of this study is that we are unable to follow these

young adults as they age into their later adult years, and thus may be under- or overestimating inequalities in debt and its consequences across the life course. In addition, our decomposition analysis is descriptive, and illustrative of the potential impact of student debt on racial disparities in wealth, but we concede that we cannot speak to causal processes with our observational data. Finally, our focus is on black-white differences, and data limitations preclude us from examining a broader range of racial and ethnic groups. Future research should continue to interrogate race and ethnic disparities in debt among young adults.

Despite these limitations, our study sheds new light on racial inequalities in student debt, and suggests that our previous estimates have underestimated these disparities. Getting a postsecondary education in the U.S. comes with the expectation of upward social mobility, and is increasingly necessary for attaining a living wage. But in an era of rising college costs, declining support for higher education, black young adults start their careers at a deep in the red, take on far more financial risks, and reap fewer rewards from their education than do whites. These racial disparities grow across the early life course, and may contribute to the fragility of the next generation of the black middle class. In light of these trends, it is plausible that student debt is a new mechanism by which racial social and economic inequalities are reproduced across generations.

NOTES

[1] Our focus here is on black-white disparities, because current research shows that these racial disparities are larger than other race/ethnic disparities. For example, Asian and Hispanic debt loads tend to more closely resemble average debt for whites (Scott-Clayton and Ling 2016)

[2] We also estimate models dropping waves when respondents were enrolled in college. The results presented here are substantively similar to those results, though our final estimates are smaller.

[3] Most missing data is from parental wealth (30%) and for profit status and sticker price (27%). Dropping this variable from the analysis or mean imputing does not change the study findings.

[4] For example, a respondent observed at age 28 is assumed to have debt levels that fall between their reported values in the YAST 25 module and YAST 30 module. Results presented here are similar when data are restructured into a YAST-wave format (where respondents are observed three times, once at each YAST survey). This is a common method when the variable is expected to be approximated by a linear trajectory over time [between waves] (see Houle & Warner 2017). We made the decision to interpolate debt as to not omit annual variation in our key independent variables and covariates, and to ensure that time started once individuals had reported attending college.

[5] Because debt amount may not reflect debt burden (Dynarski 2015) we also measure debt-to-asset and debt-to-income ratios, which produced similar results.

[6] We also used survey year as a measure of time, but chose time since enrollment in the final models to ensure that respondents entered the data (risk set) only after they had gone to college. Models using survey year as a measure of time produce substantively similar (though slightly larger) estimates. We also modeled TIME with higher order polynomials, which produced similar results.

[7] In this analysis, we also restrict our sample to blacks and whites and restructure the data into three time points to reflect the YAST20, 25, and 30 debt and asset modules. (N= 3,210; Person Years = 9630)

[8] To interpret the black-white difference in real dollars, we take the beta coefficient for race and multiply it by the square root of the squared mean of net wealth in real dollars (shown in Table 1) plus one ($\sqrt{y^2 + 1} * \beta_x$) (see Shaefer, et al., 2013:673, footnote 11).

[9] We restrict our analysis to age 25 and 30 because age 20 is relatively young to be examining differences in wealth, but these results are available on request.

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Table 1. Descriptive Statistics

	Full Sample	*Racial Differences* Black	White	t-test
Student Debt				
R has Debt (1=yes)	0.414	0.471	0.402	***
LN Debt	3.785	4.287	3.679	***
	(4.579)	(4.628)	(4.558)	
Race/Ethnicity				
Black	0.241			
White	0.625			
Other	0.135			
Young Adults' Wealth				
Net Wealth (Assets – Debts)	32694.6	16910.2	39299.5	***
	(88358.5)	(58374.6)	(86329.4)	
Social Background				
Sex (Female=1)	0.542	0.621	0.517	***
Age (in years)	25.14	25.30	25.08	***
	(3.418)	(3.406)	(3.427)	
Parents Education (<=HS degree ref)				
Some College	0.299	0.315	0.310	
Four Year Degree +	0.332	0.170	0.412	***
Parents Income (1997, LN)	8.324	7.536	8.934	***
	(4.430)	(4.463)	(4.176)	
Parents' Net Wealth (IHS transformed)	7.893	5.013	9.408	***
	(7.212)	(7.923)	(6.412)	
Family Structure of Origin (ref=2 parent bio)				
Step Family	0.126	0.138	0.123	***
Single Parent Family	0.285	0.495	0.203	***
Other Family Structure	0.0358	0.0727	0.0219	***
Number of siblings in Household (1997)	2.325	2.465	2.218	***
	(1.185)	(1.372)	(1.055)	
Postsecondary Educational Characteristics				
Highest Degree Pursued/Attained (ref=Four Year College, Degree Attained or higher				
Two Year, No Degree Attained	0.288	0.347	0.250	***
Two Year, Degree Attained	0.0895	0.0821	0.0910	*
Four Year, No Degree Attained	0.332	0.371	0.325	***
Graduate School, No Degree Attained	0.0440	0.0391	0.0466	**
Graduate School, Degree Attained	0.0389	0.0293	0.0440	***
R is currently enrolled (1=yes)	0.450	0.454	0.444	
# Years Enrolled in College	4.375	4.190	4.454	***
	(2.356)	(2.489)	(2.274)	
Prop. Years Enrolled Full Time	0.763	0.733	0.787	***
	(0.352)	(0.366)	(0.335)	

Table 1 Continued on Next Page

Table 1 Continued from Previous Page

Prop. Years Enrolled in Private Institution	0.178	0.153	0.190	***
	(0.340)	(0.315)	(0.351)	
Attended For Profit (1=yes)	0.0915	0.140	0.0672	***
Total Aid to Cost Ratio	0.794	0.858	0.711	***
	(1.337)	(1.519)	(1.316)	
Sticker Price (logged)	8.467	8.449	8.536	***
	(0.983)	(0.844)	(0.976)	
Number of Times R Unenrolled	0.649	0.687	0.641	***
	(0.621)	(0.649)	(0.607)	
Number of Times R Re-enrolls	0.208	0.248	0.191	***
	(0.460)	(0.508)	(0.438)	
Young Adult Social/Economic Characteristics				
Marital Status (Never Married=ref)				
Married	0.250	0.151	0.290	***
Divorced/Separated	0.0401	0.0367	0.0402	
Wages (LN)	8.454	7.857	8.745	***
	(3.412)	(3.778)	(3.131)	
Unsecured Debt (LN)	4.317	3.804	4.429	***
	(3.813)	(3.714)	(3.846)	
Employed Full-time (1=yes)	0.529	0.505	0.540	***
R has bio child (1=yes)	0.316	0.477	0.253	***
R lives with parents (1=yes)	0.330	0.348	0.306	***
R owns home (1=yes)	0.184	0.102	0.220	***
Financial Assets (LN)	6.949	5.342	7.616	***
	(3.429)	(3.743)	(3.033)	
Observations (Person-Years)	34149	8225	21328	

+ p<.10, * p<.05, ** p<.01, *** p<.001*;*

Note: Mean Differences reported for Interval Variables; Proportions shown for Ordinal/Nominal variables; Standard Deviation in Parentheses; Other variables not shown: urban residence (1=yes), region at survey baseline

Table 2: HLM Models Predicting Racial Disparities in Logged Student Debt at Baseline (Intercept) and Over Time (Slope)

	Model 1	Model 2	Model 3	Model 4
Intercept Estimates				
Race (white = ref)				
Black	0.606***	0.621***	0.514***	0.589***
	(0.138)	(0.139)	(0.138)	(0.140)
Other	0.120	0.124	0.043	0.064
	(0.159)	(0.160)	(0.159)	(0.160)
Slope Estimates				
Time	-0.093***	-0.093***	-0.524***	-0.428***
	(0.022)	(0.028)	(0.081)	(0.082)
Race (white = ref)				
Black	0.066***	0.054**	0.056**	0.035*
	(0.016)	(0.017)	(0.017)	(0.017)
Other	-0.026	-0.029	-0.003	-0.010
	(0.020)	(0.020)	(0.020)	(0.020)
Model Covariates				
Intercept Covariates				
Family Background[1]	Yes	Yes	Yes	Yes
PSE characteristics[2]	Yes	Yes	Yes	Yes
Young Adult Characteristics[3]	Yes	Yes	Yes	Yes
Slope Covariates				
Family Background[1]	No	Yes	Yes	Yes
PSE characteristics[2]	No	No	Yes	Yes
Young Adult Characteristics[3]	No	No	No	Yes

Notes: + p<.10, * p<.05, ** p<.01, *** p<.001; N=31,149 person-years ; standard errors in parentheses. All models adjust for number of siblings in household at baseline, family structure of origin, age, sex, region of origin, urban residence at baseline

[1]parents' income (1997), parents wealth (1997), parents education 1997

[2]degree enrolled and attained (four year, degree [ref]; four year, no degree, two year, degree; two year, no degree), years enrolled, percent of years enrolled full-time, percent of years enrolled at private institution, number of enrollment spells, for profit attendance, sticker-price (in-state tuition and fees, logged), institutional generosity (total aid as a proportion of sticker price)

[3]marital status, wages (logged) full-time employment status, home ownership, financial assets (logged), unsecured debt (logged) parental status, residence with parents.

Table 3: Results from Linear Decomposition of Racial Wealth Gap in Young Adulthood (Pooled Sample)

Panel A: Black-White Wealth Gap

	IHS transformed	Real Dollars
White net wealth	6.766	
	(0.155)	
Black net wealth	5.350	
	(0.245)	
Wealth Gap	1.416	$56,326
	(0.285)	

Panel B: Decomposition of Black-White Wealth Gap

	b	% contribution to b-w wealth gap
Total explained	1.298	91.573
	(0.223)	
Total unexplained	0.119	8.411
	(0.296)	
Student debt (LN)	0.148	10.47
	(0.147)	
Sociodemographic Background[1]	.201	14.24
	(0.157)	
PSE Characteristics[2]	0.195	13.78
	(0.072)	
Young Adult Social Roles[3]	0.509	35.97
	(0.094)	
Employment Characteristics[4]	0.243	17.13
	(0.049)	

Notes: Notes: Estimates from YAST-wave data (individuals observed at three time points, YAST20, YAST 25, YAST 30 (N= 3,210; Person Years = 9630); standard errors in parentheses

[1] parents' education, income, net wealth, family structure in adolescence, region of origin, age

[2]degree enrolled and attained, enrollment spells, years enrolled, % years enrolled full-time, %years enrolled at private institution, for profit attendance, logged sticker price, institutional generosity

[3]marital status, parental status, coresidence with parents,

[4] wages (logged) and full-time employment status

Table 4: Results from Linear Decomposition of Racial Wealth Gap in Young Adulthood (by YAST module)

Black-White Wealth Gap		
	YAST-25	YAST-30
White net wealth	$38,895	$75,768
Black net wealth	$17,018	$19,190
Wealth Gap	$21,877	$56,578
Contribution to B-W Wealth Gap (%)		
	YAST-25	YAST-30
Student debt (LN)	13.23%	23.32%

Notes: Estimates from YAST-wave data (individuals observed at three time points, YAST20, YAST 25, YAST 30 (N= 3,210; Person Years = 9630); standard errors in parentheses
Decomposition also adjusts for parents' education, income, net wealth, family structure in adolescence, region of origin, age· degree enrolled and attained, enrollment spells, years enrolled, % years enrolled full-time, %years enrolled at private institution, for profit attendance, logged sticker price, institutional generosity, marital status, parental status, coresidence with parents, wages (logged) and full-time employment status

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