

**Seeing The Destination AND The Path: Using Identity-Based Motivation to Understand
and Reduce Racial Disparities in Academic Achievement**

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Abstract

African American, Latino, and Native Americans aspire to do well in school but often fall short of this goal. We use identity-based motivation theory (Oyserman, 2007, 2015) as an organizing framework to understand how macro-level social stratification factors including racial-ethnic group membership and socioeconomic position (e.g. parental education, income) and the stigma they carry, matter. Macro-level social stratification differentially exposes students to contexts in which choice and control are limited and stigma is evoked, shaping identity-based motivation in three ways. Stratification influences which behaviors likely feel congruent with important identities, undermines belief that one's actions and effort matter, and skews chronic interpretation of one's experienced difficulties with schoolwork from interpreting experienced difficulty as implying importance (e.g., "it's for me") toward implying "impossibility." Because minority students have high aspirations, policies should invest in de-stigmatizing, scalable, universal, identity-based motivation-bolstering institutions and interventions.

Word count = 140

Seeing the destination AND the path: Using identity-based motivation to understand racial disparities in achievement and what we can do about them

“... And no one in my family has [gone] to college yet. I want to be the one that set that record for going to college. I don't want to go on the same path as my father and my mom went”
(Entering African American high school freshman, currently below grade level proficiency in both math and reading, *Armstrong Priorities Freshman Academy*)

Like the student interviewed in our opening quote, virtually all American high school students—regardless of whether or not they are racial-ethnic minorities¹, aspire to attend college (e.g., Fortin et al., 2015; Mortimer et al., 2014; O’Hara, Gibbons, Weng, Gerrard, & Simons, 2012; Rose & Baird, 2013; Staff, Johnson, Patrick, & Schulenberg, 2014; Vuolo et al., 2014). Furthermore, African Americans, Latinos, Asians and Whites are equally likely to declare high-paying STEM majors once in college (Chen & Weko, 2009; Griffith, 2010). Latino, African American and White high school students are also equally likely to feel they belong in school (Johnson, Crosnoe, & Elder, 2001)². In the cases in which there are group differences in aspirations, the evidence suggests that controlling for other factors, African American youth have *higher* educational aspirations than their White peers (for a review, Oyserman, Johnson, & James, 2011). Those high aspirations can pay off: from 1995 to 2015 the percentage of African Americans with four year degrees rose from 15% to 21% and the percentage of Latinos who have four year degrees rose from 9% to 16% (Kolodner, 2016; NCES, 2106). When those with two year associate degrees are included, then the percentage increases to about 35% (*Journal of Blacks in Higher Education*, 2016) This increase in degree attainment is especially good news since by 2020 most children will be racial-ethnic minority children (Colby &

¹ We use the term minority to refer to *underrepresented minorities* – Latinos, African Americans, and Native Americans, whose attainments are contrasted with White or with White and Asian Americans. We do this even though the studies we found focus on the differences between African-American and Latino youth and White or White and Asian youth and for the most part do not explicitly mention Native American youth. Even so, we expect that the issues we raise for Latino and African-American youth are also relevant for Native American youth and for Pacific Islanders and others within the larger Asian category.

² While Hispanic is the term used by the U.S. Census as separate from White or other race, most studies follow people’s self identification of Hispanic or Latino as a group different from White or African American. We use the term Latino throughout in this way rather than shifting between Hispanic and Latino or other terms.

Ortman, 2015; Frey, 2015; Tavernise, 2012) whose lives, as we will discuss, will be better off with better-educated parents.

At the same time, the news is not all good. Under-represented minorities are less likely to experience educational settings as supportive of their success (Cabrera et al., 1999; Hu & St. John, 2001) and their degree attainment and performance on standardized tests of attainment and proficiency lags behind that of other students (American Academy of Arts & Sciences, 2001, National Science Foundation, 2009; Davis-Kean & Jager, 2014; Fryer & Levitt, 2006; Haskin & Rouse, 2005; Loeb & Bassok, 2008). Differences in high school graduation are particularly stark for minority students attending majority minority schools (The Leadership Conference, 2008). Racial-ethnic gaps, especially those in math and science proficiency, are projected to take three to four generations to close (Beck & Muschkin, 2012; Hedges & Nowell, 1999).

Neither lack of aspirations nor lack of engagement with school is likely the problem. While all students experience a gap between their aspirations and attainment, the gap is much larger for African American and Latino students than for White and Asian³ students. For instance, prior to entering high school under-represented minorities aspire to at least as much education as other students (Oyserman et al., 2011), yet they are less likely to graduate high school (Orfield, Losen, Wald, & Swanson, 2004) or college (Jackson, 2010). And once in college, African American and Latino students are as likely to declare a STEM major as their Asian and White peers but only half as likely to actually graduate with a STEM major (Chang, Sharkness, Hurtado, & Newman, 2014; Chen & Weko, 2009; Griffith, 2010). Just as the problem does not seem to be about aspirations, there is some evidence that the problem is also not lack of engagement – depending on the study, African American high school students report higher engagement with school than White or Asian students (Shernoff & Schmidt, 2008), or just as high engagement (Johnson, Crosnoe, & Elder, 2001). They report that they are paying attention (Shernoff & Schmidt, 2008), coming to class, doing their

³ By Asian we refer to Asian Americans as a general category, recognizing that this broad category includes heterogeneity with regard to place of origin, ethnicity, educational outcomes and stigma, with Pacific Islanders for example, experiencing lower educational attainment than many others within this category (Whitehouse Facts and Figures, 2016).

homework (Johnson et al., 2001) and are just as likely to report feeling that they fit in and belong in high school (Johnson et al., 2001). However, race-ethnicity matters in more complex ways; for example, engagement is associated with better grades for White and Asian students, but this is not the case for African American students (Shernoff & Schmidt, 2008).

In the current paper we use identity-based motivation theory (Oyserman, 2007, 2015) to understand how aspirations, attachment and engagement with school might not be as helpful for minority as majority students. The identity-based motivation theory takes the approach that identities are central to understanding motivation because people prefer to act and make meaning through the lens of their identities. At the same time, the identity-to-behavior link is not always easy to discern because which specific identities come to mind and what these identities seem to imply for action and meaning-making are dynamically constructed by features of the situation. As described next, features of situations that matter are both the large structural features such as poverty and segregation and the seemingly smaller incidental features of immediate context.

While the term “identity” is often used interchangeably with social demographic *category* information, we use “identity” to mean self-definition, not categorization by others. Thus, while membership in a social category, for example, being African American, is often assumed to be the same as having an identity as an African American, we do not follow this convention. Instead, we propose that people can be schematic or aschematic for social category memberships including race-ethnicity, age, gender, body mass, and social class (see Oyserman, Kimmelmeier, Fryberg, Brosh, & Hart-Johnson, 2003). Consider racial-ethnic identity, having a racial-ethnic identity schema may imply highlighting dual membership in both the in-group and larger society, highlighting the barriers to be overcome to be included in larger society, or highlighting only in-group membership (Oyserman, et al., 2003),

Being aschematic does not mean that people are unaware of these features of themselves, but rather, that they do not see these features as meaningful ways to make sense of themselves. People who are schematic for race-ethnicity include racial-ethnic category membership as an important

component of their sense of self. People who are race-ethnicity aschematic know which racial-ethnic category others associate with them as a social fact about themselves but do not include racial-ethnic category membership as an important component of their sense of self. While this ‘color blindness’ may seem to be an individual choice, for race-ethnicity it seems to increase vulnerability to racial-ethnic stigma and stereotyping (Oyserman et al., 2003; Oyserman, 2008).

Therefore, we use the term “identity” in a more specific way. Identities are not social category labels that others confer, instead, they are the traits and characteristics, social relationships, roles, and group memberships people use to define who they are or might become, the combination of which defines their sense of self (Oyserman, Elmore, & Smith, 2012). For example, African American racial identity consists of multiple components including sense of connection, awareness of racism, and embedded achievement (Oyserman, Gant, & Ager, 1995). Sense of connection refers to feeling connected to other African Americans; awareness of racism refers to rejecting or accepting stereotypes about African Americans (Hughes, Kiecolt, Keith, & Demo, 2015; Hurd, Sellers, Cogburn, Butler-Barnes, & Zimmerman, 2013; Yip & Cross, 2004). Embedded achievement refers to believing that group membership comes with valuation of and attainment in academics (Altschul, Oyserman, & Bybee, 2006; Oyserman, Brickman, Rhodes, 2007; Oyserman, Harrison & Bybee, 2001).

Racial-ethnic identity can be content coded from responses to an open-ended question; examples of such responses (taken from Oyserman, Gant, & Ager, 1995) are: “Being African American means that there are no easy way outs, one should be ready for each obstacle.” “To be Black is wonderful. I am a member of my community.” “To be an African American means to me being strong, intelligent, and very proud of where I came from. Many African Americans have been successful and I plan to be the same way.” As can be seen, the first response focuses on the idea of overcoming difficulties – often understood

as an awareness of racism. This is clearly useful but, like the second, positive connection response, is not explicit about how these aspects of racial-ethnic identity link to academics. In contrast, the last response includes both a sense of positive connection and also link to academics.

As illustrated in Figure 1, our process model predicts that while macro-level and immediate social contexts may influence academic outcomes (e.g., time on homework, grade point average) directly (line 1), it is likely that much of their effect is indirect. Specifically, the model predicts that features of macro-level and immediate social context cue identity-based motivational processes (line 2), which influence academic outcomes, either directly (line 3) or by moderating the effect of context (line 4). That is, social contexts affect academic outcomes by influencing how students make sense of their current and future possible identities, whether they see relevant strategies (e.g., studying, asking questions in class) as congruent with who they are, and how they interpret experienced difficulties with schoolwork (Oyserman, 2009; 2013). This *identity-based motivation* in turn, influences academic outcomes directly (line 3) and by disrupting (moderating) the effect of stigma, a feature of context (line 4). Our paper synthesizes the factors represented by these lines. First, we outline individual and societal benefits of education. Then we turn to the association of educational outcomes with geographic location and place in social hierarchy. Our goal in this section is to document that geographic location and low place in social hierarchy limits choices and control and that being low in social hierarchy is culturally stigmatized. Third, we articulate identity-based motivation theory. Our goal in this section is to explain the consequences of limited choice and control and stigma on identity-based motivation and detail how identity-based motivation affects academic outcomes. Finally, we consider how our process model can be used to develop policy and interventions to improve outcomes and reduce aspiration-attainment gaps.

Insert Figure 1 Here

Individual and Societal Benefits of Education

“Education is the most powerful weapon we can use to change the world”

(Nelson Mandela, 2003)

Mandela (2003) argued for education as a means to attain control, autonomy, and justice. He was right; higher education is associated with an array of good outcomes for individuals and for the societies in which educated people live. A better-educated population is associated with more democracy (Glaeser, Ponzetto & Shleifer, 2006) and increased civic participation (Dee, 2003), higher economic growth (Gylfason, 2001), and a better functioning economy (AAAS, 2001; Bassok, 2010; Reardon & Robinson, 2008). At the individual level low education undercuts earnings – high school dropouts average \$130,000 less lifetime earnings than high school graduates (Building A Grad Nation, 2012; Levin, Belfield, Muenning, & Rouse, 2007). Among full-time earners aged 25 and older, the median weekly wage of bachelor degree holders is almost double that of high school degree holders (Bureau of Labor Statistics, 2016). Increasing wage inequality since the 1970s has magnified the positive consequences of education on wages (Acemoglu & Pischke, 2001). In addition to wages, college education is also associated with higher chance of marriage (DiPrete & Buchmann, 2006), lower divorce rates and more stable childhood environments for children, an effect that is stronger when both parents have college education (DiPrete & Buchmann, 2006; Gylfason, 2001). Benefits of college education are magnified for women, whether they are African American or White (DiPrete & Buchmann, 2006). Less educated workers are more likely to work in jobs with shifting schedules and hours, and less likely to know if their jobs will continue or be dropped, reducing their ability to control their earnings, plan their time, budget and generally to experience choice and control (Fenwick & Tausig, 2001; Mills & Blossfeld, 2006).

Geography, Place in Social Hierarchy and Educational Outcomes

Neither minorities (Frey, 2015) nor college graduates (Diamond, 2016) are equally spread across the United States (Frey, 2015). African Americans and Latinos tend to live in contexts that combine low density of college graduates and highly segregated academically low performing schools (Orfield & Lee, 2005). People with college educations cluster in places with better quality of life and they improve the quality of life in the places to which they move; when people with college educations move from a geographic area, the quality of life in this area declines for all those who are left behind (Diamond, 2016). Living in a more segregated area with more income inequality is a risk factor, increasing odds of high school dropout and reducing odds of college completion (Kearney, 2015). Minorities are overrepresented in these risky contexts --in almost all major cities low-income African American and Latino students attend highly segregated schools in which 90% or more of students are racial-ethnic minorities and low-income (Boschma & Brownstein, 2016; Hannah-Jones, 2014).

Geography and Place in Social Hierarchy

High school and college graduation rates differ by state of residence within the United States (e.g., Building A Grad Nation, 2012; Diamond, 2016; Nadworny, 2015; National Center for Educational Statistics, 2015; Winters, 2015). Majority minority school systems such as that in the District of Columbia, which has more than two thirds African American enrolled, have particularly poor high school graduation rates. For example only about 60% of their students graduate. Turning to college enrollment, the geographic pattern is complex, but the proportion of college graduates is generally lower in the Southern than in the Northern United States (Kennan, 2015). Having graduated college in a state increases the odds of staying in that state and states that produce more college graduates attract college graduates from other places (Groen, 2004; Winters, 2015). Taken together,

there is a strong positive relationship between a state's production of college graduates and the proportion of college graduates living in the state (Winter, 2015).

Living in a place with more college graduates matters; college graduates increase the quality of education in elementary and secondary schools in the places they live, an effect that is larger than would be predicted by their higher wages alone (Diamond, 2016; Winter, 2015). This produces a cycle in which places that attract educated workers become contexts in which elementary and secondary education improves (Diamond, 2016). The converse is also true: as educated workers leave, quality of education declines (Diamond, 2016). For the individual student, school quality matters because on average, students seem to assimilate to the standards of their classroom, so that as average class performance improves, individual students benefit (for a review, Antecol et al., 2016). Classroom standards provide a benchmark for how much work is needed, in higher performing schools the norm for engagement is higher, whether assessed by attendance or time on homework (Johnson et al., 2001).

Of course another benchmark would be whether one is actually proficient in a content domain, separate from whether one is doing more or less work and attaining better or worse scores than one's peers. It is this broader standard that is tested in standardized tests. Unfortunately, judging whether one knows or has learned the material is especially problematic for students who are not yet proficient; these students often overestimate how much they know and how well they have done on tests and as a result they may be "unskilled and unaware" (Kruger & Dunning, 1999). A large body of work suggests that low performing students are often unaware of their lack of skill (Feld, Sauermann, & De Grip, 2015), confusing the grades they want to attain with the ones they likely will attain given their current efforts (Serra & DeMarree, 2016). As a result, they spend too little time on difficult problems (Ehrlinger, Mitchum, & Dweck, 2016). It is not that students attending schools with

higher level academic performance are assumed to have a better ability to judge whether they have learned the material, rather that they are more engaged, do more homework because the standard for what is enough shifts (Johnson et al., 2001) and this improves their outcomes.

Analyses of nationally representative samples of high school students do not show a race difference in student's sense of fitting in and belonging at school (Johnson et al., 2001)⁴. However, students generally report higher sense of fitting in and belonging in schools in which their racial-ethnic group dominates (Johnson et al., 2001). Moreover, experiencing fitting in and belonging socially may not be the same as understanding how school works as an academic process (Johnson et al., 2001). That is, as noted above, in highly segregated economically disadvantaged minority-dominant schools, students may be both 'unskilled and unaware' of it and have only their immediate peers rather than input a college-educated context as a marker of their own standing. Hence students may lack a larger compass within which to situate their progress.

That is what Antecol and colleagues (2016) found in their large scale study of low-income minority students who were randomized into classrooms in minority dominant schools. Specifically, in these schools, high performing students were negatively affected by higher classroom average attainment and low performing students were positively affected by lower classroom average attainment. Though measures of identity were not obtained, these results imply that students were contrasting themselves with their peers and using their relative position to infer how to include academics in their identity. Whether students conclude that academic work is a "me" or a "not me" thing to do influences their subsequent performance – students who were low performing at baseline do better after positive (downward) contrast with their peers. Students who were high performing at baseline do

⁴ As Johnson et al. note, this finding differs from findings using smaller samples. However, the Johnson et al data come from a representative sample of high school students and hence include students in an array of high school types (high and low academically performing, majority minority, majority White and so on).

worse after negative (upward) contrast with their peers. Students who were midrange performers at baseline, having no contrast, simply infer their sense of whether academics is a “me” thing to do from their classroom performance. Antecol and colleagues (2016) ruled out the alternative possibility which was that teachers were simply better able to advance a low performing class than a high performing one because contrast effects were not found for students in the midrange of ability.

Effects of one’s standing in one’s immediate classroom should matter more in contexts in which alternative sources of information are missing as would be the case in high poverty, minority concentrated neighborhoods in which most people did not attain their educational aspirations. Indeed, while having academically successful friends is predictive of better academic outcomes for both White and African American high school students, for White students, academically successful friends are most protective if students and their friends are both attending low performing schools (Crosnoe, Cavanaugh, & Elder, 2003). The reverse is the case for African American students; for them, academically successful friends is a significantly less protective factor in the context of a low performing school (Crosnoe et al., 2003).

Families and Place in Social Hierarchy

Minority children are more likely to be from low-income families whose members attained low levels of education, which place them at the bottom of the social hierarchy (Basch, 2011; Cameron & Heckman, 2001; Duncan & Magnuson, 2005; Hallinan, 2001; Hedges & Nowell, 1999). The two are related; for example, in California, race-based education gaps account for the race-based wage gaps between workers who are African American or Latino and those who are Asian or White (Public Policy Institute of California, 2003). Parental poverty and low education carries over to risk for children, increasing the odds of children entering school with deficits in their verbal skills and doubling the odds of their eventual high school dropout (Duncan & Brooks-Gunn, 2000). In contrast to children from families at the bottom of the social hierarchy, those from families at top of the social

hierarchy have better educational outcomes. Thus, higher family income and education is associated with better test performance and higher likelihood of completing high school, entering and completing college (Entwisle, Alexander, & Olson, 2005; Huang, Guo, Kim, & Sherraden, 2010; Kim & Sherraden, 2011; Loke & Sacco, 2011). While the associations between child educational outcomes and family education, poverty, income and employment are clear, the underlying process by which these factors influence child outcomes remains unclear (Duncan, Yueng, Brooks-Gunn, & Smith, 1998; Violato, Petrou, Gray, & Redshaw, 2011). That is, without considering intermediate processes, such as the ones we have begun to describe, it is not clear how place in social hierarchy translates to academic outcomes.

Place in Social Hierarchy, Sense of Control and Social Stigma

How is it that minority racial-ethnic group membership, educational and income markers of low place in social hierarchy are so intertwined? Though historical socio-structural causes are often overlooked, history is a place to start. Prejudice-based discriminatory policies (mortgage red-lining, segregation, pay gaps) substantially and continually limited minority families' social and economic capital (Cameron & Heckman, 2001; Farley, 1977; Kuebler & Rugh, 2013; Loury, 1977; Marshall & Jobu, 1975; Williams & Collins, 2001). While these policies and practices are no longer legal, as a society, we still bear the mark of these practices.

Effects of those historical policies continue to impact educational outcomes today since, as outlined above, children from families with less education and fewer assets are more at risk educationally. By limiting choice and control, these discriminatory policies not only consigned minorities to the bottom of America's social hierarchy, but being at the bottom itself cued a negatively marked (stigmatized) identity as being deficient – having low ability or low will (Oyserman & Fisher, in press; Oyserman, Smith & Elmore, 2014). Stigmas, which are negatively marked actual or imagined attributes about people (Goffman, 1963; Link & Phelan, 2001; Major & O'Brien, 2005), form the basis of discriminatory treatment and stereotypes -- culturally shared descriptions of the character and characteristics of people with these attributes (Oyserman & Fisher, in press; Snyder, Tanke, & Berscheid, 1977; Steele, 2010). Poverty, welfare receipt, lack of education, living in a bad

neighborhood, and being discriminated against are all potential stigmas, especially if perceived as one's own fault -- stemming from one's own actions and deficits rather than the result of social structure (Blumkin, Margalioth, Sadka, 2013; for a review, Pescosolido & Martin, 2015).

Stigmatization by others and internalized by the targets of this socio-economic disadvantage based stigma is particularly likely given that American culture highlights the power of individuals to steer their own course (Oyserman, 2017). If low place in social hierarchy is stigmatizing and reduces sense of choice and control, then the effects of low place in social hierarchy could vary by whether families carry other stigmatized identities – for example minority racial-ethnic status. Evidence for an effect of racial-ethnic status separate from economic effects is mixed, though clearly economic effects often intermingle with race-ethnicity effects (Blum et al., 2000; Gormley & Phillips, 2005; Leob et al., 2007). For example, in a longitudinal kindergarten to eighth grade analysis using the National Center for Education Statistics' (NCES) Early Childhood Longitudinal Study, a nationally representative sample, Quinn and Cooc (2015) found that taking family income, education, and occupational prestige into account substantially reduced the gap in the science attainment of Latino and African American students, compared to White students. Other studies suggest that once socio-economic resource differences are accounted for statistically, race-ethnicity gaps disappear, so that after adding these controls, racial-ethnic minority and white students are equally likely to be enrolled in a 2- or 4-year college at age 22 (Entwisle et al., 2005). Some analyses even suggest that racial-ethnic minority youth would be slightly *more* likely to enroll in four year colleges than White youth if they came from families with the same demographics (e.g., parental level of education, family income, number of siblings, location of residence, Cameron & Heckman, 2001). These results imply that what appear to be race-ethnicity gaps may, in fact, be stigma driven.

As demographics shift, the consumers of public services, such as public education, are becoming majority minority – serving more minority than White students (Maxwell, 2014). Indeed, most public school students today are racial-ethnic minorities and more than half qualify for free or reduced lunch (Bidwell, 2015; Boschma & Brownstein, 2016). If minorities are stigmatized as not worthy, and the legacy of discriminatory social policies continues, we expect that this shift will undermine support for public expenditures on education. Indeed, the combined stigma of low place in social hierarchy and of the association of minority status with low place in social hierarchy may explain why services provided based on low place in social hierarchy, so-called “means tested” services (e.g., services provided based on recipients’ low income), are often stigmatizing themselves (Wilson, 2012). ‘Honest’ poverty – poverty that is no fault of one’s own, that occurs in spite of working or being willing to work, and in the context of taking responsibility for one’s dependents, is not granted to the stigmatized poor (Levine-Clark, 2015). Over time, these programs often suffer from low funding and public support since it is not clear if the stigmatized are ‘deserving’ of public support (Delvin & Wolff, 2015; Gilens, 1999; Quadagno, 1994).

An example of this is Head Start, the largest preschool program in the United States is means tested. That is, eligibility is linked to the Federal Poverty Line so that only those meeting standards of poverty and need are eligible (Miller et al., 2016; U.S. DHHS, 2010a, 2010b). As would be expected if the program is stigmatized, Head Start teachers earn less (about half of what public school teachers do) and the program is often criticized as unsuccessful despite successes, including increased likelihood of high school completion by early twenties (Deming, 2009; Garces, Thomas, & Currie, 2002), and other social benefits including reducing long-term crime rates (Garces et al., 2002).

Until now we have documented that aspiration-attainment gaps are associated with place in social hierarchy, whether place is defined by geographic location or family circumstance. The evidence suggests that the negative predictive power of neighborhood poverty and attending a low academically performing school are stronger for students coming from low-income and minority families than for students coming from high-income, White families (also called cumulative

disadvantage, Pals & Kaplan, 2006; Sampson, Morenoff & Gannon-Rowley, 2002). **Identity-based**

Motivation Theory: Seeing the Destination and Navigating the Path

As we demonstrate in this section, identity-based motivation theory provides an explanation for the gap between desired and attained outcomes, an explication of how social structural factors and stigma increase this gap, and a set of mechanisms through which children in high-risk contexts can succeed. Identity-based motivation theory is a social psychological theory of motivation and goal pursuit that explains when and in which situations people's identities motivate them to take action toward their goals (Oyserman, 2007, 2009a, 2013, 2015). It predicts that although people experience themselves as having stable identities across situations, in fact, which identities come to mind and what they imply for action and meaning-making change as a function of features of immediate situations (Oyserman, 2009a, 2009b). These elements of identity-based motivation, termed dynamic construction, action-readiness, and procedural-readiness in the theory, are assumed to be associative knowledge networks so that activating one element activates the others (Oyserman, Bybee, & Terry, 2006; Oyserman, 2007).

Returning to our process model, the empirical evidence we have presented thus far suggests that the effect of social context on academic outcomes is not simply direct (line 1), but occurs via effects on other factors (line 2). We term these factors, identity-based motivation. The idea that place in social hierarchy has psychological consequences on how the self is conceived has been considered from a number of angles (e.g., Gecas & Schwalbe, 1983). One important formulation is that middle class professional work provides a sense of autonomy and a sense of controlling one's own fate in a way denied to the unemployed or those employed in 'at will' contracts (e.g., Gecas & Schwalbe, 1983) and this is stressing (Lachman & Weaver, 1998; Oyserman, Smith, & Elmore, 2014). One way to test the prediction that minorities and others low in the social hierarchy have to either reframe their goals or suffer loss of self-regard is to examine whether racial-ethnic groups differ in self-esteem depending on social position (Hafdahl & Gray-Little, 2002; Twenge & Crocker, 2002). Recall that in

the general sense, goals are the same – in that aspirations for college are uniformly high. Empirical support for this prediction of loss of self-regard, operationalized as self-esteem, is not clear for a number of reasons. First, meta-analyses find that African Americans report higher self-esteem than Whites, who report higher self-esteem than other American groups (Latinos, Native Americans, Asian Americans). Second, among African Americans, high self-esteem is associated with high sense of in-group connection with other African Americans and low self-esteem is associated with holding African Americans in low regard (Hughes, Kiecolt, Keith, & Demo, 2015; Richardson, Macon, Mustafaa, Bogan, Cole-Lewis, & Chavous, 2015). Moreover, the relationship between self-esteem and academic attainment is neither strong nor linear (Hope et al., 2013). These results imply that stigma of low place in social hierarchy does not directly carry over to less positive self-regard for African Americans. Moreover, positive self-regard may not be a useful focus for operationalizing how low place in social hierarchy matters for identity for other reasons as well: first, responses to self-esteem measures likely vary by cultural frame (Cai, Brown, Deng & Oakes, 2007) and second, the positive consequences of having high self-esteem are unclear (Baumeister et al., 2003).

While self-esteem may not be the path linking low place in social hierarchy to academic outcomes, the self can be implicated in the process by which low place in social hierarchy influences academic outcomes in other ways. One way is via the effect of low place in social hierarchy on sense of control. Though the relationship between academic outcomes and low sense of control is not yet well studied, the relationship between low place social hierarchy and low sense of control has been documented for health outcomes (for a review, Oyserman et al., 2014). Moreover, experimentally manipulating subjective sense of social class causally shifts sense of control (Krause, Piff, & Keltner, 2009). The implication is that high vs. low place in social hierarchy matters not simply because families can purchase more or fewer educational resources but also because place provides a greater vs. weaker sense of choice and control over one's fate. If that is the case, then high position should lead students to see success at schoolwork as identity-congruent, to see strategies for doing well as effective for people like them, and to interpret their experienced difficulties with schoolwork as implying the need to engage in more effort. In contrast, a low place in social hierarchy should

undermine students' perceptions that their choices and efforts matter, reducing the likelihood that school-focused possible identities come to mind or feel relevant in the moment (Oyserman, 2013, 2015).

Indeed, experimentally manipulating the extent to which students experience (Smith, James, Varnum, & Oyserman, 2014) or are reminded (Bi & Oyserman, 2015) of their lack of choice and control reduces the salience of their school-focused possible identities and increases their belief in fate, especially if they have no reason to believe that they have or could have internal resources to overcome these challenges (Bi & Oyserman, 2015). This is illustrated in the following two sets of studies. In one set of experiments, Smith and colleagues (2014) had students fill out open-ended possible identities questionnaires before or after they were reminded of the high level of economic uncertainty for people like themselves who planned to be college graduates in a few short years. Students were then either reminded that they have or could have the skills and abilities to attain their goals or led to question whether they did. Students were more likely to report academically focused possible identities, linked with strategies, more likely to choose to work on a resume builder program rather than play video games if they felt confident about their skills and abilities but the world was uncertain.

In the second study set, Bi and Oyserman (2015) used a different manipulation in their work with high poverty middle school students in rural China. About 4 in 10 of these children are left behind by their impoverished parents who leave to find work but cannot take their children with them, leaving them at school during the week; during the weekends they are with relatives or alone. Given the high likelihood that one could be left behind, Bi and Oyserman had the children write about their possible identities and belief in fate either before or after being asked whether they were "left behind" children. As predicted, students scored higher on fatalism (e.g. "I rarely try to change things, things are as they are because they are not destined to change") and generated fewer possible identities linked to strategies, if they were first asked if they had been "left behind" yet. In this rural low-income population, having possible identities linked to strategies mattered, predicting test scores among both left behind and non-left behind students a year later.

As we outline in this section, we predict that this dual force of (a) experiencing limits on choice and control and (b) stigma about having less choice and control affects educational outcomes by changing identity-based motivation (line 3) and by the interaction of accessible stigma-based stereotypes and identity-based motivation (line 4). That is, educational outcomes can be improved by increasing the likelihood that : (1) aspirations to do well in school come to mind and feel congruent with important social identities, (2) school-focused strategies will come to mind, and (3) experienced difficulty with schoolwork will be interpreted as implying task importance (line 3). Once instantiated, stigmas and linked stereotypes provide an accessible interpretation of what experienced difficulties with schoolwork might imply – that the odds of succeeding are low, that strategies such as studying or staying after school will not work, and that achieving school success is not possible ‘for me’ (line 4, e.g., Oyserman, 2015). For this undermining effect to occur, stigma and linked stereotypes do not need to change educational aspirations (e.g., Lewis & Sekaquaptewa, 2016; Steele, 2010), they just need to make sustained effort to attain one’s aspirations less likely.

Three lines of empirical evidence provide support for our predictions. First, research on the link between difficulty and schoolwork documents that for high performing college students, schoolwork is implicitly associated with importance (Cricher & Ferguson, 2016). Second, research on the link between power and cognition documents that less power and control is associated with reasoning in terms of situation and proximal details rather than in terms of values and abstract goals (Fiske, Dupree, Nicolas, & Swencionis, 2016; Magee & Smith, 2013). Poverty functions like cognitive load, undermining focus on the big picture (Shah, Mullainathan, & Shafir, 2012). Sense of control mediates the relationship between subjective socioeconomic status and this situated reasoning style (Kraus et al., 2009). Third, being lower in objective socioeconomic status (e.g., having less than a high school education), is associated with less endorsement of the idea that experiencing difficulty can signal importance of the goal one is focused on attaining (Aelenei, Lewis, & Oyserman, 2016). This effect is particularly pronounced for minorities, implying that for minorities attaining college education is a particularly important route to experiencing difficulty as importance, whereas for

whites there may be other paths given their less stigmatized place in social hierarchy (Aelenei et al., 2016).

The evidence cited above in our review of the literature on educational disparities implies that disparities in educational outcomes are not due to gaps in aspiration between groups, but instead are due to the ways in which social structural forces shape educational attainment. Social structural factors are relatively impossible to change without large-scale, long term and financially intensive intervention directed at changing opportunity structures (e.g., Vera & Reese, 2000; Walsh, Galassi, Murphy, & Park-Taylor, 2002). At the same time, as we outline in this section on identity-based motivation, social structural factors influence the aspiration-achievement gap, in part, through their influence on children's perceptions of what is possible for them and people like them in the future (Destin & Oyserman, 2009, 2010; Oyserman, Bybee, & Terry, 2006; Oyserman, Terry & Bybee, 2002). Accordingly, interventions that focus on this macro-micro interface and emphasize the meaning students make of their possibilities can help students overcome the constraints imposed by social structural variables.

Identity-based motivation theory assumes that the self-concept is multifaceted, including many diverse and not well integrated identity-components whose content is dynamically constructed in context. People interpret situations in ways that are congruent with their currently active identities, prefer identity-congruent actions to identity-incongruent ones, and interpret any difficulties they encounter in light of identity-congruence. When actions feel identity-congruent, experienced difficulty engaging in relevant behaviors simply highlights that the behavior is important and meaningful. Conversely, when action feels identity-incongruent, the same difficulty suggests that engaging in these behaviors is pointless and “not for people like me.” As we will demonstrate, these perceptions have important downstream effects on engagement in school-focused judgments (e.g., planning to

study), behaviors (including engagement with classroom activities and time spent on homework), and outcomes (including standardized test scores and grades in school).

William James (1890) first articulated a version of these postulates by arguing that the self includes content, motivation, and action tendencies, that social contexts matter for who one is in the moment, and that the self is malleable. In that sense, the identity-based motivation approach is rooted in the earliest psychological formulation of self-concept. The novel approach that the identity-based motivation model brings to our understanding of how social contexts influence behavior is two-fold. First, it focuses on predicting *when and how* aspects of the self-concept matter by operationalizing the three core postulates (dynamic construction, action-readiness, and procedural readiness) in a manner amenable to experimental manipulation. Second, it focuses on experimental methodology to test the efficacy of these postulates to predict behavioral outcomes in the moment and to form the basis for interventions influencing behaviors over time.

To illustrate what dynamic construction, action-readiness and procedural-readiness mean and how they operate in tandem, we start with an example and then turn to the empirical evidence. Our concrete example is of a particular identity – racial identity as an African-American, a particular action – doing schoolwork in class or at home, and a particular mental procedure, interpreting experienced ease or difficulty while engaged with schoolwork. People may or may not chronically think about their racial identity, but they are certainly more likely to think about it in some contexts than in others and when they do, what comes to mind is likely to matter for whether or not schoolwork feels like a “me” or “us” thing to do. Consider an African-American middle school student in a classroom. Once racial identity is on his mind, what does that identity imply for his behavior? On one hand, there is no fixed way to “be African American,” no correct way in which being African American connects to schoolwork, and no fixed way in which to interpret difficulty while doing

schoolwork. “Being African American” might mean buckling down and doing your schoolwork in order to get the scholarship to go to college or it might mean chatting instead of focusing in class or cutting class to hang out with friends. Which way of “being African American” gets dynamically constructed is a function of chronic and momentary cues, which, once activated carry action- and procedural-readiness --a propensity to act and make sense of experiences in ways that fit what “being African American” means in the moment.

Depending on what being African American or “Black” means in that particular moment, the appropriate behavior might be to do schoolwork or not. If, in context, the “Black thing to do” is to skip schoolwork, then the experienced difficulty associated with doing schoolwork implies that one should go ahead and skip it, because skipping in that context would be to engage in identity-congruent behavior. If on the other hand, the “Black thing to do” in context is to do schoolwork, then the same experienced difficulty associated with doing schoolwork highlights that one is doing the right thing, since doing schoolwork in that context is the identity-congruent behavior. Experienced difficulty while acting in the identity congruent way implies that success (doing schoolwork) is important.

In the next three subsections we summarize empirical evidence for each of the three components of identity-based motivation and what each implies for racial-ethnic disparities in education. We end with considerations of how policy makers can use identity-based motivation to reduce educational disparities.

The Dynamic Construction of Identity

“A self is not something static, tied up in a pretty parcel handed to the child, finished and complete. A self is always becoming.”

(Madeleine L'Engle, 1984)

Low-income and minority children are more likely to live in high-unemployment and high-poverty neighborhoods and to go to schools in those contexts (Bureau of Labor

Statistics, 2009). These neighborhoods have a number of characteristics that undermine the potential for students to develop education promoting identities. First, they tend to be segregated, and that segregation is associated with both limited exposure to adults who are college graduates (Adelman & Gocker, 2007; Krivo, Peterson, Rizzo, & Reynolds, 1998) and with lower endorsement of the three aspects of racial-ethnic identity that are predictive of academic attainment: connectedness – feeling a positive sense of connection to one’s racial-ethnic in-group, awareness of racism – grappling with how out-group members view the in-group, and embedded achievement – the belief that achievement is a goal that is valued by the in-group (Oyserman, Gant, & Ager, 1995; Oyserman & Yoon, 2009). Second, these contexts are likely to be media saturated, providing vivid models of education-independent adult identities such as those in sports and entertainment (Roberts, 2000). Given the lack of easily accessible models of people “like me” who have succeeded in school, youths’ commitments to education may remain abstract and hence rarely cued as part of identity, and thus may seldom be linked to everyday behaviors (Roderick, 2003; Oyserman, Johnson & James, 2011).

Yet, as noted in our introduction, minority students do aspire to college and do feel that they are engaged and fit and belong in school as much as other students do. This implies that the problem is not whether a “me as college student” or “me as college graduate” possible self exists. Instead, the problem is whether that possible future identity comes to mind frequently and whether, when it does, it is linked to strategies (action-readiness) and to productive interpretation of experienced difficulty (procedural-readiness). Hence the question should not be framed as whether minority students incorporate academics into their racial-ethnic identities (Fryer, 2006; Ogbu, 2004) or whether they have academically focused possible identities. Instead the question is whether in context, these identities are likely to come to mind and if they are linked to strategies and productive interpretation of experienced

difficulty when they do come to mind. To matter, possible identities need to both come to mind and be experienced as relevant to current possibilities for action (e.g., Landau, Oyserman, Keefer, & Smith, 2014).

Consider the following experiment with low-income middle school students, which focused on linking gender identity with academic success (Elmore & Oyserman, 2012). Students were randomly assigned to interpret one of four graphs that showed accurate Census information from their state. They saw either a graph about earnings or about high school graduation rates. For half of students, graphs broke down the information by gender. Thus, boys and girls either saw that men succeed (they earn more money) or that women succeed (they graduate high school more often). The other half of students got the information without gender comparisons. After viewing the graphs, students were asked open-ended questions about the coming year, given a novel math task, and then asked about their farther future aspirations. The motivational consequence of seeing the graph depended on whether or not the graph implied that people like ‘me’ succeed. Thus, as detailed next, boys performed worse than girls except in the ‘men succeed’ condition. In the ‘men succeed’ condition, boys generated more academic possible identities and strategies to attain them for the coming year and more career-oriented possible identities for the farther future, and they were more engaged with their current schoolwork, as exhibited by better performance on the novel math task (Elmore & Oyserman, 2012). This experiment demonstrates that what a current identity – in this case gender, implies for action depends on the context in which that identity is constructed. Boys could think of doing well in school as congruent with, part of, being male; however, they typically don’t think this without a nudge toward identity congruence, as Elmore and Oyserman (2012) demonstrated. With regard to race-ethnicity, the same should be the case (Oyserman, Brickman, Rhodes, 2007; Oyserman, Bybee, Terry, 2003); hence interventions cannot assume that the reason race-ethnicity linked educational disparities exist

is because racial-ethnic minority students do not have a “successful student” possible identity or that one cannot be easily elicited given the right context. As we have shown, whether racial-ethnic identity and school-focused possible identities are positively correlated or not related at all depends on situational cues (e.g. Oyserman et al., 2006).

Action Readiness

“To be an African American means to me being strong, intelligent, and very proud of where I came from. Many African Americans have been successful and I plan to be the same way.”

(African American Middle School Student, Oyserman, Gant, & Ager, 1995)

The student quoted above was asked what it means to be African American by a college student sitting with him in the middle school library. This was part of an experiment in which a group of eighth graders in the school responded to the same open-ended question. Half were randomly assigned to answer this question before they were given a novel math task to try and half were randomly assigned to answer this question after doing the math task. What they said about being an African American was only associated with how they did on the math task if they were asked the question *before* doing the math task. What they said did not matter for their performance if they were asked the question after doing the math task. This is consistent with the prediction that identities only matter if they are on one’s mind at the moment of action. Whether thinking about being African American improved or hindered performance depended on what students actually said – students like the one we quoted who expressed a sense of connection to the African American community coupled with a sense that doing well academically is what ‘we’ do, did better on the math task. This was not the case for students who did not express the combination of connection and this notion of embedded achievement, even if they did mention awareness of racism. The math task was novel so students did not know if they would be good at it, they were more inclined to give it

a shot and keep going if they had just finished saying something that implied that part of being African American is engaging with schoolwork (Oyserman, Gant, & Ager, 1995).

Within the identity-based framework, this is termed ‘action readiness,’ readiness to act in ways that appear congruent with the way one is thinking about some identity in the moment. The implication is that students will pay attention to educational information, adhere to the advice of their instructors, and hence reap the benefits of their time in the classroom only if school related activities feel congruent with important aspects of their identity, including racial-ethnic, gender and class-based identities (Oyserman & Destin, 2010). Conversely, if engaging with school does not feel congruent with important aspects of identity, students will not reap the benefits school contexts have to offer. Stated differently, if a student feels that *education-promoting* behaviors are congruent with things “people like me” do, then they are more likely to do those things (Oyserman, Bybee, & Terry, 2006). In the same way, if *education-undermining* behaviors feel congruent with things “people like me” do they are more likely to do those behaviors (Smith & Oyserman, 2015). This idea is what identity-based motivation theory describes as action readiness (Oyserman, 2015a, 2015b).

Racial-ethnic identity serves as a lens through which students interpret and make meaning of their experiences. It allows them to make sense of themselves as group members, gives meaning to current and historical barriers faced by members of their racial-ethnic in-group, and allows them to organize self-relevant knowledge about their personal effort and its meaning to themselves and other in-group members (Oyserman, Brickman, & Rhodes, 2007; Oyserman & Harrison, 1998). In order to effectively reduce racial-ethnic disparities in education then, educators and policy makers must consider the links between students’ racial-ethnic identities and school-relevant behaviors. Without a clear understanding of these

associations, and the fact that these associations change across contexts, interventions aimed at reducing disparities are unlikely to succeed.

It is important to note that the messages students receive about their racial identity in their chronic social contexts (neighborhood, home) can also influence the extent to which school focused behaviors feel identity-congruent, and hence worth acting on (Oyserman & Destin, 2010). In low-income, racial-ethnic minority dominated contexts, racial-ethnic identities may include information about academics that undermine children's belief in the identity congruence of school-focused effort. Studies using a variety of methods converge in suggesting that students' perceptions of racial-ethnic groups contain predictions about academic behaviors. Kao's (2000) ethnographic research suggests that high school students across ethnicities perceive Latinos as more likely to become manual laborers, Asians to do well in school, and African Americans to do poorly in school. Hudley and Graham (2001) showed a similar pattern of results in a scenario-based experimental paradigm. Latino and African American students presented with a scenario about a target student who is failing in school were more likely to predict that the target was Latino or African-American than White. These results were replicated when low-income children were asked to infer the performance of a target student. When asked to predict academic performance of a target student, low-income students infer worse performance from low (vs. middle) social class peers (Regner, Huguet, & Monteil, 2002; Weigner, 2000). Taken as a whole, these results imply that racial-ethnic and low-income identity have implications for whether or not students believe their actions might matter for school outcomes.

Procedural Readiness

“The ultimate measure of a man is not where he stands in moments of comfort and convenience, but where he stands at times of challenge and controversy.”

(Martin Luther King, Jr. last speech before his death)

The third component of identity-based motivation is procedural readiness, or readiness to make sense of experiences through the lens of identity. How the lens of identity influences this readiness to make sense of experience has been studied by considering two identity lenses. The first lens is which kind of identity is on one's mind, with particular focus on whether the salient identity is a social identity (such as race-ethnicity, gender, or social class) or a personal identity (such as a possible identity as an 'A' student in middle school). The second lens is whether salient identity is experienced as certain or uncertain using a variety of operationalizations of certainty. As detailed next, an emerging literature shows the importance of each of these two identity lenses on procedural readiness elucidating how experience is interpreted and acted on.

Is a social identity or a personal identity salient? As highlighted in social identity and stereotype threat theories (e.g. Sedikides & Brewer, 2015), when a social identity such as race-ethnicity is made salient, people may be more likely to think of themselves in terms of their relationships and group memberships. They also may be more likely to interpret their experiences using a *collectivistic* relational lens. That is, contexts that cue social identities such as racial-ethnic, gender, or social class, may also inadvertently cue the mental procedures related to collectivistic mindsets. This matters because accessible collectivistic (vs. individualistic) lens influences how information is processed and recalled (for a review, Oyserman, in press, 2017). That is, a collectivistic lens increases use of holistic, connecting mental procedures (e.g., seeing how elements connect) while an individualistic lens increases use of analytic, separating mental procedures (e.g., focusing on a main point).

As linked to academic attainment, it is not so much about which procedure is used but whether accessible procedure matches the task at hand that matters (for a review, Oyserman & Destin, 2010). If the task is better solved using an analytic procedure, cuing a connecting

procedure undermines performance. For example, in one experiment, Latino, African American, and White students were given moderately difficult GRE problems to solve after they had completed an ostensibly unrelated language task in which they were asked to read a paragraph and circle the pronouns (Oyserman, Sorensen, Reber, & Chen, 2009). In this task, students were given a list of possible pronouns and unbeknownst to them were randomized into two groups, one group received a paragraph containing first person singular pronouns (I, me, my) and the other group received a paragraph containing first person plural pronouns (we, our, us). Prior research showed that while the latter cued a connecting-relating, collectivistic mindset, the former cued a separating-pulling apart individualistic mindset. Because the GRE problems require ignoring stray details and focusing on core rules, those in the individualistic mindset condition scored significantly better at GRE problems (Oyserman, Sorensen, Reber, & Chen, 2009).

Does salient identity feel certain or uncertain? In the prior section, we focused on the consequences of contextual cues that trigger accessibility of personal vs. social identities, which affect whether an individualistic or collectivistic mindset is likely to be used to make sense of experience. In this section we consider other consequences of these cues. These are the experienced certainty with which one entertains a possible identity, the centrality of this identity for one's sense of self, and the effect of experienced certainty or centrality on meaning-making. To concretize what we mean, consider the following example of a student, who like many others, wants to do well in school. At any particular moment, a 'good student' identity may or may not feel central to who one is – it may feel more central when singled out to receive praise in front of one's cousins and less central while playing video games. At the same time, a 'good student' possible future identity may feel highly likely or rather uncertain to be attained. Just as the individualistic and collectivistic mindsets that are triggered by contextual cues to focus on personal or social identities influence how people make sense of

their experience, so do experienced identity certainty and centrality. The procedural readiness cued in the case of experienced identity certainty and centrality is readiness to interpret experienced ease and difficulty. In contexts that cue certainty and centrality of academic identities, low-income and minority students are likely to interpret experienced difficulty working on schoolwork as a signal that the schoolwork is important. In contrast, in contexts that undermine certainty and centrality of academic identities, low-income and minority students are likely to interpret experienced difficulty working on schoolwork as a signal that the schoolwork is impossible for them.

This prediction of identity-based motivation theory has been supported empirically. In one study, students were more likely to endorse the idea that experienced difficulty implies importance after being guided to consider their possible identities as a good fit for their likely college experience (Oyserman, Destin, & Novin, 2015). Fit could occur in one of two ways. First, fit could occur if students were guided to consider college as a context in which success was likely and to consider their own positive possible identities. Second, fit could occur if students were guided to consider college as a context in which failure was likely and to consider their own feared possible identities.

What does experienced difficulty mean? Once a social or personal identity is salient and a student has a sense of how certain or central that identity is for their sense of self, this provides them with a lens through which to interpret experiences in school particularly experienced difficulty. How students interpret experienced difficulty has important consequences. Interpretation of experienced difficulty as a signal of school importance rather than as impossibility matters for persistent engagement and performance on school tasks (Elmore, Oyserman, Smith, & Novin, 2016; Oyserman, Novin, Smith, Elmore, & Nurra, 2016, 2016; Smith & Oyserman, 2015). Both interpretations of experienced difficulty are available in our shared cultural schema which is why sayings such as “no pain, no gain” and

“it’s just not worth my time” both seem intuitive and obvious. Empirical evidence supports this intuition – people do think in both ways (Fisher & Oyserman, 2016). That is, people understand that difficulty could mean importance (e.g., the difficulty experienced when dieting and exercising, serve as reminders of their importance for long term health), or impossibility (e.g., regardless of how much we exercise, the authors of this paper will never be Olympians, if we are thinking of exercise as a way to attain this possible identity, we might as well give up). Only one interpretation can be active in a given moment (Fisher & Oyserman, 2016), but which gets activated can be influenced by both momentary and chronic contextual cues. For example, in some studies, just reading four statements that either focused participants’ attention on the idea that important things are often difficult or focused their attention on the idea that impossible things are often difficult was needed to activate an interpretation and influence outcomes (e.g. Aelenei, Lewis, & Oyserman, 2016; Oyserman, Destin, & Novin, 2015). In a number of studies, when an interpretation of experienced difficulty as importance is cued, students were more likely to focus on academics when asked about their possible identities (Oyserman, Novin, et al., 2016), more likely to say that academics are central to their sense of self generally (Smith & Oyserman, 2015), and more likely to feel certain that they can attain these possible selves (Aelenei, Lewis, & Oyserman, 2016). Importantly, more chronic cues such as low academic attainment, can also influence these interpretations (Aelenei et al., 2016).

When something feels difficult to do, that experience can mean that the odds of succeeding are low. If the odds of success are low, one should be less motivated to persist; after all, the task is basically impossible to do, so one should switch to something else rather than wasting one’s time. Indeed, that is what expectancy value theories predict (Feather, 1992; Wigfield, Tonks, & Eccles, 2004) and at least to some extent, document (Wigfield & Eccles, 2000). But as highlighted in the opening quote by Martin Luther King, experienced

difficulty can also imply that something is important and thus worth the effort, and according to identity-based motivation theory, that interpretation of experienced difficulty is more likely in contexts in which relevant identities feel central to one's sense of self and are experienced as relatively certain to be attained. In effect, this implies that experienced difficulty as importance is separable from the idea that experienced difficulty implies that the odds are low odds of success – the odds essentially matter less if something is important (e.g. Higgins, 1998). Indeed, empirical evidence documents that interpretation of difficulty as importance and interpretation of difficulty as impossibility are not the same as self-efficacy, locus of control, and other measures of motivation, including the idea that ability can change (“growth” mindset) and belief in one's own persistence (“grit” or mental toughness, Fisher & Oyserman, 2016). Students led to consider that experienced difficulty might mean importance were more efficient learners-- scoring better on a performance task, more sensitive to which study strategy worked for them, and less likely to be overconfident about their performance (Yan & Oyserman, 2016).

Implications for Policy

Our review highlights three core conclusions about disparities in education that have important implications for policy. First, the problem of education disparities is not lack of aspirations but the gap between aspiration and attainment, a gap that is exacerbated by low place in social hierarchy that differentially exposes students to education undermining contexts. Second, low place in social hierarchy stigmatizes the institutions meant to serve minority students and decreases chances that identity-based motivation processes will be triggered in ways that promote educational attainment. Third, intervention is needed to cue the three elements of identity-based motivation (dynamic construction of identity, action-readiness, and procedural readiness) so that they can moderate the otherwise negative effect

of stigma and linked stereotypes on low-income and minority students' interpretation of their experiences in school. Implications of each of these conclusions are detailed next.

Aspirations are not the problem; policies should address aspiration-attainment gaps instead.

First, as noted earlier, there is a large body of evidence documenting that minority students do aspire to college and do declare difficult STEM majors at the same level as Whites and Asians (e.g., Chen & Weko, 2009; Fortin et al., 2015; Mortimer et al., 2014; O'Hara, Gibbons, Weng, Gerrard, & Simons, 2012; Rose & Baird, 2013; Staff, Johnson, Patrick, & Schulenberg, 2014; Vuolo et al., 2014). Hence educational disparities are not due to failures of aspiration among minority students (for review of additional literature on this issue, Oyserman, Johnson, & James, 2011). If aspirations are not the problem, then policies designed to increase student aspirations or college bound possible identities are unlikely to be helpful – they would be attempting to solve a problem that does not exist. Instead, policy efforts to reduce disparities should focus on reducing the size of the gap between aspirations and attainment for minority students by advancing interventions that bolster identity based motivational processes.

Identity-based motivation theory highlights three ways in which this gap is likely to be larger for low-income and minority students even though they want to do well in school. First, if few others in their everyday contexts went to college, low-income and minority students may believe that college is in the distal future and fail to notice that now is the time to get going. Failure to notice that now is the time to get going can happen either because their college-bound possible identities do not come to mind or because these possible identities do not seem relevant in their school contexts. Second, stigma and stereotyping in intergroup settings and isolation from standards set in higher performing schools for students

in majority minority settings both undermine action-readiness even if college bound possible identities come to mind. Being unaware that one needs to work more or uncertain whether more effort will pay off undermines attainment. Third, salient identities can undermine school performance via the mental procedures that they cue in two different ways. If social identities such as racial-ethnic, social class, or gender identities are salient, they may evoke a collectivistic mindset, cuing heuristic, connecting and relating mental procedures that may mismatch with analytic (discovering a main point or underlying rule) procedures that schoolwork may often require. Moreover, if contexts undermine the experienced centrality or certainty of academic possible identities, students are less likely to interpret experienced difficulty as implying task importance, which reduces time on task and task performance.

The “School to Jobs” intervention was designed to address these issues in low-income and majority minority schools (Oyserman, Terry, & Bybee, 2002; Oyserman, Bybee, & Terry, 2006). Participation in School-to-Jobs significantly improved the school attendance and grade point averages of low-income and minority students compared to school as usual control group students. The School-to-Jobs intervention involves activities meant to trigger each of the elements of identity-based motivation: certainty about current and possible identities, practice linking these identities to strategies for action, and practice interpreting difficulty as importance. A randomized controlled trial of the intervention took place in the beginning of the eighth grade and then students were followed through eighth and ninth grade. The eighth grade students in the control condition went to school as usual and experienced the usual certainties about their identities and the usual difficulties with schoolwork without structured interpretation (Oyserman, Bybee, & Terry, 2006). Eighth grade students in the intervention condition participated in 12 bi-weekly in-class group activities. The intervention was completed before the end of the first quarter of the marking period. At baseline, intervention and control group did not differ on any of the obtained

measures (school grades, attendance, homework time, in-class behavior including teacher report of engagement and possible identities) and no difference was expected given randomization to group.

However, after receiving the intervention, the intervention group differed from the control group. The first post intervention data were collected at the end of the second semester of eighth grade. Data collection continued through the end of the following school year – ninth grade. These post-intervention points showed that students in the intervention group had better grades, spent more time on their homework, had better attendance and standardized test scores compared to control group students. Effects did not differ by race or gender; and though the sample was predominantly African American, Latino students equally benefitted. Effects were mediated by change in school-focused possible identities and strategies to attain them. The intervention took place in Detroit and was implemented by Detroit residents with undergraduate degrees who received only a week of training. This implies that successful delivery of the program is not dependent on highly skilled staff (staff received only a week of training, and had only undergraduate degrees and were not certified teachers).

To be policy relevant, intervention must be scalable. To test scalability, Chicago Public School eighth grade teachers are currently being trained to deliver School-to-Jobs in their classrooms (Oyserman & Sorensen Institute for Educational Studies Grant #R305A140281). Teachers receive two or three days of professional development training and the intervention manual. Their classrooms are videotaped and videotapes are coded for fidelity of implementation, by separately coding for adherence to the activities in the manual, quality of delivery, and quality of receipt. Initial evidence shows that teachers can implement with fidelity, and that when they do, they change identity-based motivation, which changes in-class behavior and homework time (Horowitz, Sorensen, Yoder, & Oyserman, 2016).

Teachers who were trained in two days then trained teachers from other schools in three days. Initial analyses show that this results in fidelity of implementation that is at least as high as when trained by the developer, implying a path to policy-relevant scalability. An alternative to teacher-delivered intervention is to use a digital platform, whether in school or in out of school settings such as Boys and Girls clubs. Oyserman and colleagues have received Federal funding to develop both kinds of digital platforms as both address different ways in which to scale intervention and are complementary rather than competing possibilities.

Low place in social hierarchy is stigmatizing: Policies should not reinforce stigma through means-tested service provisions.

Second, we highlighted the link between racial-ethnic attainment gaps and policies that both kept racial-ethnic minorities from attaining education and accruing assets while at the same time stigmatizing their low position in social hierarchy. This stigma makes the general public question whether those in low social positions are deserving of public investment (Blumkin et al., 2013; Gilens, 1999; Pescosolido & Martin, 2015; Quadagno, 1994). Hence services provided only to those with low-income or only to those who are racial-ethnic minorities are likely to be stigmatized, and may perpetuate the stigmatization of their intended beneficiaries, a cycle that can result in reduced funding and staffing for programs. These stigmatization processes are consequential for education and education disparities. For example, despite their benefits to society, programs such as Head Start that are administered in racially-ethnically segregated contexts tend to receive greater criticism and less funding (Head Start teachers are less qualified and earn substantially less than public school teachers) than programs that serve more majority group members. This makes it more difficult for minority students to attain their academic goals if the academic resources available to them are more limited due to social stigma. Without the resources to foster a

connection between a school identity and the relevant strategies for attaining school-relevant goals, students are likely to interpret experienced difficulties as impossibility, which undermines their sustained effort. Hence one policy implication is to provide de-stigmatized universal services rather than stigmatized “means-tested” ones (see also Goldstein, 2016).

Examples of universal, non-means tested ways to improve educational outcomes are universal pre-kindergarten, universal child development accounts (Curley & Sherraden, 2000; Loke & Sherraden, 2009), and universal family and child allowances (Béland, Blomqvist, Andersen, Palme, & Waddan, 2014; Henneck, 2003; United Nations Development Program, 2011). Children whose families have assets and children who believe that they are saving for their educational future, no matter their current asset level, are more likely to finish high school, enroll in, and finish college (for a review, Oyserman, 2013).

Social stigma and social position jointly influence identity-based motivation: Policies should encourage community investment in paths to success.

Third, we have highlighted how geographic segregation of minorities and college-educated groups exacerbated the effects of stigma. Minority students are likely to live and go to school in contexts that are highly segregated by markers of position in social hierarchy in which the relative proportion of college graduates is low and concentration of minorities is high. This leaves students more likely to have only their peers as comparison standards so that their relative standing provides a sense of identity (e.g., Antecol et al., 2016) and if they fall behind national standards, they are likely to be unaware, mistaking their desire to succeed with their actual success (e.g., Serra & DeMarree, 2016). In contexts in which there are few college graduates, even if college bound possible identities come to mind, these identities are unlikely to feel relevant to current possibilities for action and less likely to be linked to specific strategies, since few others in the contexts provide models for how to do this.

Moreover, though others can provide support, they themselves may not be able to give useful advice as to how to proceed toward college-focused futures. Hence, in addition to structured activities to activate identity-based motivation, policies to increase access to higher education, using open-access and low cost institutions of higher learning (community colleges) as gateways, and reducing barriers such as high cost of public college, and infiltration of predatory for profit degree granting institutions are needed⁵. To the extent that low-income and racial-ethnic minority desire to attain education but do not know the path and feel stigmatized, they are more likely to end up in dead-ends rather than along the path to success (Taylor & Appel, 2014; Quinlan, 2015; as reviewed more broadly by the National Association for College Admission Counseling, 2016).

Concluding Comments

America is diversifying rapidly and the new generation of Americans is majority minority, which means that the strengthening of minority Americans will strengthen America's future. The good news is that Americans, whether African American, Latino, White, or Asian American, desire education, aspire to finish college, and to major in sciences, technology, engineering, and math. The bad news is that macro-level structural factors, often legacies of our racist past, impede this goal more for African American and Latino Americans than for other Americans, and that because we stigmatize people for their low place in social hierarchies and geographically isolate them, it is harder to leverage identity-based motivation to succeed than might be expected. Universal rather than means-tested policies that provide scalable solutions to these issues, including educational programming to help students see their college-bound future self as currently relevant, to appreciate experienced difficulties as motivational cues and obtain actionable feedback about strategies to attain this future self will help not only individual students, but American economy and society as a whole.

⁵ For a review of these issues see National Association for College Admission Counseling, 2016.

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