

Justifying and Explaining Disproportionality, 1968–2008: A Critique of Underlying Views of Culture

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ABSTRACT: *Special education has made considerable advances in research, policy, and practice in its short history. However, students from historically underserved groups continue to be disproportionately identified as requiring special education. Support for color-blind practices and policies can justify racial disproportionality in special education and signal a retrenchment to deficit views about students from historically underserved groups. We respond to these emerging concerns through an analysis of arguments that justify disproportionality. We also identify explanations of the problem and critique the views of culture that underlie these explanations. We conclude with a brief discussion of implications and future directions.*

Special education has made considerable improvements in policy, research, and practice in its short history. Students with disabilities were severely underserved prior to 1975. In contrast, services are now provided to more than 200,000 infants, toddlers and their families, and more than 6 million children and youth with disabilities (Schiller, O'Reilly, & Fiore, 2006). Since 1994,

the number of students with disabilities served in general education classrooms has increased gradually from about 46% to about 57% (Sullivan & Kozleski, 2008). However, students from historically underserved groups are and have been disproportionately placed in special education (Artiles, Trent, & Palmer, 2004). We use the term *historically underserved groups* to describe "students from diverse racial, cultural, linguistic, and economically disadvantaged backgrounds who

have experienced sustained school failure over time" [Trent, in press]. We use this term as a way to foreground these students' position in U.S. society as oppressed groups. This way, we place *power* at the center of analyses and discussions about the educational experiences of these students.). Researchers, practitioners, and advocates, mostly in the special education field, have debated for 4 decades whether disproportionality is a problem and how to explain it (Donovan & Cross, 2002). Examples of the intensity and complexity of these debates permeate litigation; amendments to the Individuals With Disabilities Education Act (IDEA); statements from professional and civil rights groups; two National Research Council (NRC) panels in a 20-year period (Donovan & Cross, 2002; Heller, Holtzman, & Messick, 1982); and research studies, training, and technical assistance initiatives, some of which were supported with federal grants.

In addition, the long-standing tacit support for color-blind research and policies (Spencer, 2008) can have important consequences for how racial inequities in special education are explained and addressed. A typical example found in the disproportionality literature is the tendency to privilege poverty explanations. For instance, in his expert testimony on behalf of school districts charged with racial inequity in special education in Delaware, Reschly concluded, "With better measures of poverty, the gap [between races in special education] would be further reduced if not eliminated" (*Coalition to Save Our Children v. State Board of Ed. of Delaware*, 1995, 821). We argue the continued support of color-blind explanations will stall the generation of knowledge, interventions, and policies that honor the complexities of racial inequities in special education. Our goal in this article, therefore, is to create an alternative discourse to these trends as a way to inform visions of a more equitable future for students from historically underserved groups.

OVERVIEW OF THE PROBLEM AND ITS AMBIGUITIES

Disproportionate representation is defined as "the extent to which membership in a given (ethnic,

socioeconomic, linguistic, or gender) group affects the probability of being placed in a specific disability category" (Oswald, Coutinho, Best, & Singh, 1999, p. 198). Disproportionality is a multidimensional problem, and families and educators (particularly special educators) have been trying to solve it, perhaps with greater intensity in the last 15 years. The latest NRC report confirmed, again, that learners from historically underserved groups are disproportionately represented in high-incidence disability categories (mild mental retardation [MMR], learning disability [LD], and emotional/behavioral disorder [EBD]; Donovan & Cross, 2002). As we explain in a subsequent section, student race is the most common proxy of culture used in this scholarship, although poverty, ethnicity, language background, and gender are also used. We emphasize throughout the article the notion that race is one of many ways that researchers and practitioners might begin to understand and respond to the complex ways in which the institutional cultures of schooling and the cultural histories and trajectories of students and families collide, are conflated, and often essentialized. Rather than use race as a proxy for all these complexities, we show how making complexity transparent (through a more theoretically sound use of the notion of culture) helps create a context in which disproportionality and other manifestations of power and privilege can be addressed in social institutions like schools.

The latest NRC report confirmed, again, that learners from historically underserved groups are disproportionately represented in high-incidence disability categories.

Placement data suggest African Americans and Native Americans are overrepresented in high-incidence disability categories at the national level. Community income level and the percentage of minority students in a community appear to mediate overrepresentation patterns, and there is emerging evidence about the role of language background (Artiles, Rueda, Salazar, & Higuera, 2005; Oswald et al., 1999). Disparate representation patterns emerge as researchers analyze evi-

dence at various levels (national, state, district, school, grade) or across disability category, year, student ethnicity, language status, and gender. There is evidence that placement patterns can be moderated by structural factors (e.g., funding, teacher quality) and large-scale reforms (e.g., discipline policies, high-stakes testing; Losen & Orfield, 2002), as well as by the culture of schools and the values, attitudes, and capacities of administrators and school staff (Osher, Woodruff, & Sims, 2002).

To add to the complexity, high-incidence disabilities are also described as "judgmental" categories, which means the diagnosis of these conditions relies heavily on professional clinical decisions. This situation complicates the identification of students needing special education and determining whether such diagnosis is a problem. Because these disabilities often lack clear biological etiologies, their definition and operationalization (including eligibility criteria and the validity and reliability of measures and assessment processes) can be fraught with ambiguity, uncertainty, and bias. In addition, the identification process is a high-stakes one, insofar as these labels are accompanied by social stigma (U.S. Public Health Services, 1999). Stigma also affects families (Friesen & Osher, 1996), and is particularly pronounced in some cultural communities, such as among many Latino ethnic groups (U.S. Public Health Services, 2001).

The fact that identification may lead to segregated placements may further exacerbate the stakes for groups, such as African Americans and Native Americans, who have historically been denied opportunities by institutionally sanctioned segregationist policies and practices. Questions about misidentification of these students resulting from discriminatory practices, prejudices, or plain racism have been raised (Patton, 1998).

An alternative position asks why the disproportionate representation of children from historically underserved groups in Title I and other remediation programs does *not* raise equity concerns (MacMillan & Reschly, 1998). Herein lies one of the most puzzling paradoxes that this debate has created—namely, how policy and programmatic resources (i.e., special education) created to address the civil rights of a marginalized group (i.e., students with disabilities) can

constitute an index of inequality for other marginalized groups (i.e., students from historically underserved groups)? As we explain in a subsequent section, multiple explanations have been advanced to tackle this contemporary puzzle of educational policy and practice.

The complexity of the problem might seem overwhelming. How do we make sense of this complex picture, advance our understanding of this problem, and implement solutions? As a first step in answering these questions, we critique the traditional position that avoids situating the problem in societal and historical contexts, and (often implicitly) justifies disproportionality. Second, we identify explanations of the problem and critique the views of culture that underlie these explanations. We rely mostly on a systematic review of disproportionality research published since 1968 (Waitoller, Artiles, & Cheney, in press) and the latest NRC report (Donovan & Cross, 2002). We used the NRC report for three reasons: It (a) represents the most comprehensive and up-to-date synthesis of the problem; (b) has the potential to influence systemic understandings of the problem (theoretical explanations, research questions), future research efforts (e.g., funding priorities, design preferences), legislative and policy initiatives; and (c) reflects theoretical and methodological tensions that permeate this predicament as panel members represent a fairly broad spectrum of disciplines and scientific paradigms. Because one of the NRC report's emphases is on child factors, we analyzed the chapter that covers the influences on cognitive and behavioral child development (Chapter 3, particularly pp. 118–140). In addition, the NRC report stressed systemic issues and devoted considerable attention to general education and transactions that occur between students and teachers (Chapter 5). This is an important point for, heretofore, this scholarship has not been as explicit about the key role played by general education. For this reason, we analyzed the chapter on the general education context. We also allude to the report's views of culture in some of the recommendations about school (social, cultural, and contextual) issues influencing achievement and behavior, teacher quality, and the improvement and expansion of the research base.

**JUSTIFYING
DISPROPORTIONALITY:
A CRITIQUE OF TRADITIONAL
VIEWS**

A long-standing position found in the disproportionality literature both seemingly justifies disproportionality and tends to minimize the significance or magnitude of the problem. As we explain in the following, endorsers of this view express reservations as to whether racial disproportionality in disability categories is indeed a problem. The reluctance to frame disproportionality as a problem stresses technical arguments that ignore the role of historical, contextual, and structural forces. Similarly, this position has ignored the notion of culture and its impact on professional practices. Three arguments are most often associated with this traditional stance: (a) the critical impact of poverty on school performance, (b) the benefits of special education in providing a safety net for struggling learners, and (c) the value added of special education outcomes. We review these arguments, suggesting that, at the least, the field of special education needs to understand more deeply the complexities within each argument.

*THE POVERTY HYPOTHESIS:
COMPLICATING VENERABLE ARGUMENTS*

The correlation between poor school performance and poverty has been cited to justify disproportionality. The logic is that because children from historically underserved groups are more likely to live in low-income households and experience stressors and developmental threats, these children will be more likely to fail in school (see Skiba et al., 2008 for a review). These children are also more likely than White peers to have limited English proficiency, have parents who recently immigrated to the United States, and be retained (Komenski, Jamieson, & Martinez, 2001). Research on the school performance of children from historically underserved groups living in poverty reveals that they may experience difficulty in several areas including (a) language development, (b) literacy, (c) numeracy skills, (d) content knowledge, and (e) social and emotional skills (Donovan & Cross, 2002). These data have been cited to remind educational researchers and prac-

tioners that students from historically underserved groups may have more needs that stem from disabling conditions than majority populations. MacMillan and Reschly (1998), for instance, conclude that, "social class, and not ethnicity, would explain more variance in the rates of detection for these high-incidence disabilities, particularly MMR" (p. 20). They reiterated this point by asking, "How much unique variance in enrollment rates is explained by ethnicity after that explained by social class has been partitioned out? Relatively little, we suspect" (p. 23). Another example of this position was summarized in Hosp and Reschly (2003):

Because African American and Hispanic students have been demonstrated to perform more poorly than their Caucasian peers on academic measures . . . and often come from more economically disadvantaged backgrounds . . . some critics have argued that their rates of referral and eligibility for special education should be higher than the rates for Caucasian students. (p. 76)

It should be noted that the underlying assumptions of this position have been challenged by recent research evidence. For instance, Losen and Orfield (2002) point out that although Latinos are disproportionately poor, this group is not overrepresented in special education at the national level. Research studies also suggest that, "poverty makes a weak and inconsistent contribution to the prediction of disproportionality across a number of disability categories" (Skiba, Poloni-Staudinger, Simmons, Feggins, & Chung, 2005, p. 130). Most discussions about the role of poverty in disproportionality have tended to ignore recent research that acknowledges the complex nature and impact of poverty (e.g., considerations of magnitude, duration, timing, generational differences), and thus, it is not uncommon to find overgeneralizations in this literature stemming from definitions of poverty that only account for single factors (e.g., cross-sectional income level data). In addition, many of these discussions make problematic assumptions about development and what constitutes "normal" pathways. For example, referents based on White middle class families' experiences are used while ignoring that cultural communities within

the United States and throughout the world create goals and promote their children's development contingent on context-specific opportunities and constraints; thus, cultural communities' practices should be examined in light of complex adaptation and accommodation processes to ecological contingencies (O'Connor & Fernandez, 2006; Rogoff, 2003).

Because data on the impact of poverty are often presented in terms of biological factors that cause developmental problems in these groups (e.g., low-birth weight, exposure to alcohol during pregnancy, poor nutrition that can lead to limited vocabulary, delayed cognitive development, etc.), the evidence also serves to ossify the assumption that the *outcome* of living under particular conditions is *the inherent defining feature of these groups*. Historically, this logic has evolved from the identification of correlational patterns to assumptions about the inherent nature of students from historically underserved groups living in poverty, assumptions that are ingrained in the general public's consciousness, including school personnel.

A complex dilemma arises, therefore, from the use of these demographic markers to signal need for supports and services. On the one hand, sociodemographic labels can have negative effects. Indeed, the conflation of group markers (e.g., race) with the impact of structural threats like poverty heightens the probability of finding blame within the group. As a result, intervening on behalf of children has unintended stigmatizing consequences. On the other hand, because the need for support can be great among children living in intergenerational poverty conditions, educators and health-care workers may lose sight of the greater need for prevention that focuses on the circumstances that have historically created and perpetuated poverty within some communities but not others.

This does not mean that we object to efforts at addressing poor children's needs. We object to focusing *exclusively* on a narrow unit of intervention when addressing disproportionality. Our analyses and solutions *must also focus* on what we do at the meso and macro levels to eliminate the barriers to educational opportunity, work, safe housing, and so forth. Other factors, including the policy development process, policy implemen-

tation, research practices, teacher preparation, and school quality are rarely addressed in a coordinated fashion to prevent the perpetuation of this problem through the participation of many (often good intentioned) individuals and groups.

*SPECIAL EDUCATION'S PROMISE AND
THE VAGARIES OF A RACIALLY
STRATIFIED SOCIETY*

We sketch a synopsis of the history of special education shortly before and after the passage of IDEA to situate the problematic interlocking of race and ability in sociohistorical contexts (Ferri & Connor, 2005). Prior to the enactment of the Individuals With Disabilities Education Act (IDEA) and primarily because of advocacy and litigation influenced in part by the civil rights movement (e.g., *Pennsylvania Association for Retarded Children [PARC] v. Commonwealth of Pennsylvania*, 1972), several states passed laws designed to protect the rights of children with disabilities. With the passage of IDEA, all students with disabilities in the United States were afforded this opportunity. This historic legislation dramatically changed the operation of school districts and schools across the country. There were six major principles required by the new mandate to ensure that all children with disabilities would have access to specialized educational services. These principles included (a) a zero reject model, (b) nondiscriminatory evaluation (e.g., testing in both the primary language and English), (c) a free and appropriate education based on the development and maintenance of an individualized education program (IEP) that would be monitored and updated at regular intervals, (d) education in the least restrictive environment, (LRE; placement in settings with nondisabled students to the fullest extent possible), (e) procedural due process for parents and schools, and (f) parental as well as student participation (when appropriate) in all phases of the special education process (e.g., referral, eligibility, IEP development). With the enactment of these principles, advocates, educators, and policy makers believed that all children, no matter their race, language, or social class, would progress through a fair and equitable educational process with higher per pupil expenditures, lower teacher-student ratios, and effective instructional

interventions designed to meet their unique needs. The field of special education had come into its own. The battle had been fought, the victory won. If the narrative ended here, disproportionality might be considered an acceptable side effect because special education promised so much in terms of educational equity.

Ironically, the procedural safeguards and principles of IDEA appeared to have set the stage for the creation of an educational system that would provide more effective and equitable educational services to a broader array of learners. However, when engaged in policy development and implementation, policy makers and practitioners did not consider cultural-historical factors that might result in unintended outcomes. For instance, little, if any, consideration was given to the fact that there were misalignments between the *Brown v. Board of Education* (1954) decision and IDEA. Even though school desegregation became the law of the land, reviews of special education placement after *Brown* and the passage of IDEA reveal an increase in the representation of students from historically underserved groups in special education as their enrollments increased in previously all-White schools (Mercer & Richardson, 1975). Furthermore, the relationships among African American parents, African American schools, and African American communities were dismantled after the mandatory desegregation of schools. This change significantly compromised African American parents' ability to advocate on behalf of their children who were being disproportionately placed in programs designed to support students identified as MMR (Trent, 2003).

A recent study highlighted another example of the unintended impact of policies that affected students from historically underserved groups. Articles et al (2005) analyzed special education placement data for English language learners (ELLs) in several large school districts after the passage of Proposition 227, which severely restricted bilingual education programs and native language instruction. They found that ELLs with limited language proficiency, whether in the native language or in English, were between 1.42 and 2.43 times more likely than English-speaking students to be placed in programs for students with MMR, LD, or speech and language impairments (SLI) in spite of the fact that districts were following ap-

proved procedures for prereferral, referral, and identification. Moreover, ELLs receiving the *least* language support were more likely to be placed in special education; for instance, learners receiving all of their instruction in English were almost three times more likely to be in special education resource rooms than those receiving some native language support. These data reinforce the importance of systematically examining how the confluence of multiple policy initiatives can have unintended consequences for various groups, particularly when implementation takes place in a racially stratified society, in this case special education placement practices for historically underserved groups (Ferri & Connor, 2005).

WHAT HAPPENS AFTER SPECIAL EDUCATION PLACEMENT? UNFULFILLED PROMISES

As stated earlier, disproportionality is arguably justified because (a) many students from historically underserved groups need special education because of the developmental threats that result from high poverty rates observed in these communities and (b) special education embodies many desirable features (e.g., low teacher-student ratio, individualized education, higher expenditures per pupil, etc.) that can improve the educational experiences and outcomes of these students. A critical empirical question is, therefore, does special education deliver on its promises? We outline evidence in three areas to address this question, namely, academic performance, placement restrictiveness, and other equity indices (e.g., dropouts).

Academic Performance. Longitudinal evidence suggests students with disabilities have been slowly improving their educational outcomes since special education students were mandated to participate in state assessments (Cortiella, 2007). However, the National Longitudinal Transition Study of Students in Special Education II (Wagner, Newman, Cameto, Levine, & Garza, 2006) reported the persistence of a considerable achievement gap in language arts, mathematics, science, and social studies between special education students and their nondisabled peers. Data from the National Assessment of Education Progress (NAEP) show that students with disabilities are

performing on the average about 32 points below their general education counterparts, but the range is large across state level aggregated data from 61 points or more in three states to 20 points or less in five states (Cortiella, 2007).

It could be argued that students with disabilities are expected to perform lower than their non-special education peers because an identification criterion is a need for intensive specialized interventions. However, special education is designed to address performance differences by providing services, supports, and intensive instruction that help students make progress in the academic curriculum. Such progress, should, over time, decrease the achievement gap between students with and without disabilities, particularly in the high-incidence categories. Thus, disproportionate placement of students from historically underserved populations remains problematic as long as special education services fail to narrow the achievement gap between students with and without disabilities. And, where achievement gaps exist for students within disability categories, based on race, equity concerns deepen with the ways in which special education is currently constructed and delivered.

Placement Restrictiveness. Once students who are from historically underserved populations are identified for special education services, they are more likely to be placed in more segregated settings than their White peers *with the same disability label* (Cartledge, Singh, & Gibson, 2008). Longitudinal analysis by the National Institute for Urban School Improvement (2008) shows that, on the average, African American students are only half as likely to be placed in general education environments as their White peers. Two additional studies support this finding (Fierros & Conroy, 2002).

The Special Education Elementary Longitudinal Study (SEELS), a study of more than 11,000 school-age students suggested that concern about where a student with disabilities is educated is appropriate (Blackorby et al., 2005). The SEELS data indicate that overall, students with disabilities who spend more time in general education classrooms tend to be absent less, perform closer to grade level than their peers in pull-out settings, and have higher achievement test scores (Blackorby et al., 2005).

Other Special Education Equity Indices.

Alarming dropout rates and poor postschool outcomes plague special education. Kemp (2006) noted that although the overall U.S. dropout rate is at about 11%, it is considerably higher for students in special education. Students identified for EBD have a dropout rate of between 50% and 59%, whereas more than a third of all students with LD drop out of school (Kemp, 2006). Estimates of the number of youth with disabilities in detention, private, and public correctional facilities range from 30% to 70% (Quinn, Rutherford, Leone, Osher, & Poirier, 2005). Further, a national study on transition to adulthood reported that only 3 of 10 individuals with disabilities who had exited public school had enrolled in postsecondary education as compared to about 41% of their nondisabled peers (Wagner et al., 2006). Students with LDs that enroll in college are predominantly from White middle class backgrounds (Reid & McKnight, 2006). It was also reported that about 40% of out-of-school youth with disabilities were employed in comparison with about 63% of their same age, nondisabled peers (Wagner et al., 2006).

Henderson (2001) found that ethnic disparities are found within the special education student population. For instance, students from historically underserved groups placed in special education are less likely to receive related services (i.e., occupational and vocational services) than their White peers with the same disability label. Parrish (2002) documented significant disparities in funding allocation patterns in districts with high enrollment of students from historically underserved groups. Osher et al. (2002) examined the 2000 data from the U.S. Office of Special Education Programs and found that, "The risk of [B]lack and [W]hite students with disabilities being removed from school across all fifty states ranged as high as 25.9 percent for [B]lack students to a low of 7.02 percent for [W]hite students" (p. 97). Although some of these data do not explicitly address outcomes for students from historically underserved groups, they are problematic for all students who experience special education. Thus, whereas special education offers great promise, it has had mixed long-term results, making disproportionality a grave concern. If special education outcomes are problematic for

some groups of students, then the argument that overidentifying some students for special education in the interest of making sure that everyone who needs special education gets it is, at best, compromised.

HOW IS DISPROPORTIONALITY EXPLAINED? A CRITIQUE OF UNDERLYING VIEWS OF CULTURE

How do researchers explain disproportionality? Multiple answers have been provided to address this question. The debate has been polarized by simplistic explanations that blame racist individuals or biased systems. However, it has been proposed that a confluence of forces should be accounted for when explaining this complex problem (Artiles & Trent, 1994). For instance, analyses of disproportionality must take into account the historical patterns of racial and socioeconomic segregation of the United States and how these patterns can reflect and reinforce prejudiced and stereotyped perceptions of "the other" (Eitle, 2002). Experimental studies in social psychology suggest that racial stereotypes can be activated automatically and influence social judgments in a manner that is not perceived by individuals making the stereotyped judgment (Adams, Biernat, Branscombe, Crandall, & Wrightsman, 2008) who may feel embarrassed if they felt prejudiced (Fiske, 2004). Similarly, analyses should take into account the changing demographics of schools and how these changes affect disproportionality (Osher, Cartledge, Oswald, Artiles, & Coutinho, 2004). Furthermore, disproportionate representation must be examined in the context of service outcome disparities across multiple domains, which reflect the long-term impact of the aforementioned factors (Osher et al., 2004).

The preceding discussion suggests disproportionality must be conceptualized as a multidimensional phenomenon (see Artiles & Trent, 1994 and Skiba et al., 2008 for discussions on this point). Thus, it is important to ask, how does published research fare in relation to the way this problem has been theorized? We identify the kinds of explanations pursued in empirical studies

and critique their underlying assumptions about culture. Before we explain how we conducted our analysis and report findings, we offer a rationale for the need to examine underlying views of culture.

WHY A FOCUS ON VIEWS OF CULTURE

Why would one examine the assumptions about culture that inform explanations of this problem? This is a puzzling question considering that special education research, like other social science disciplines, has tended to ignore or treat culture and some of its traditional proxies (e.g., race, ethnicity) in problematic ways (Artiles, Trent, & Kuan, 1997; Graham, 1992; Zuberi & Bonilla-Silva, 2008). Culture is seldom acknowledged explicitly in disproportionality work even though assumptions about this construct often permeate this literature. Examples of such assumptions include how culture mediates human development, the influence of students' cultural tool kits and household cultures in children's literacy repertoires, the role of teachers' cultural theories about student failure in special education referrals, and the roles of classroom and community cultural contexts in student performance and professional practices. Other examples include school personnel's assumptions about language variations, including the process of second language or dialect acquisition, the benefits of native language versus English instruction, the definition of normal versus disordered language, and effective interventions for learners from underserved communities.

The research on special education interventions is another case in point. For example, the latest NRC report consistently recognized the dearth of intervention research for students from historically underserved communities as illustrated by these statements (Donovan & Cross, 2002):

Rigorous research on instructional interventions for English language learners has been sparse. (p. 195)

Minority students are often represented in intervention research. However, findings for minority students are rarely, if ever, disaggregated and compared to majority students with LD or BD. The assumption is that the performance of minority students with dis-

abilities is comparable to majority students with disabilities. (p. 329)

Of the 180 intervention studies of students with LD that were synthesized by Swanson et al. . . . the majority did not report ethnicity . . . Findings disaggregated by ethnicity were neither provided nor possible to calculate. (p. 330)

The committee is not aware of any published studies that compare the quality of special education programs or the efficacy of specific instructional practices among various racial/ethnic groups. (p. 338)

Notice that a view of culture as a marker variable (e.g., race, ethnicity, students' English proficiency, social class) underlies this discussion. The NRC report acknowledged the available intervention evidence is suggestive at best for historically underserved students. A critical reason, therefore, to analyze views of culture in this literature, is to help us understand the theoretical basis of the existing knowledge base on placement practices with students from historically underserved communities, who happen to be the most affected by disproportionality. The insights gained from this analysis can, in turn, guide the conceptualization of future research that transcends culture blindness.

EVIDENCE SOURCES

We looked for explanations of disproportionality in this literature and relied heavily on the 2002 NRC report (Donovan & Cross, 2002) and a recent systematic review of this research (Waitoller et al., in press). The NRC report offered useful insights about disproportionate representation. For instance, consistent with current thinking in this area (Klingner et al., 2005), the report acknowledged this problem is shaped considerably by general education factors; historically, disproportionality was assumed to be a special education issue. The report articulated a complex framework to explain the problem that covered structural forces (e.g., funding, class size, personnel quality), individual factors (e.g., the fit between student cognitive and social skills and the school setting), interactional processes (e.g., teacher biased perceptions, student resistance), and historical legacies (e.g., discrimination,

racism). The bulk of the evidence reviewed in the NRC report stressed two domains: (a) child factors (e.g., impact of poverty on children's development), and (b) systemic issues (e.g., general education factors, variables related to the special education process; Donovan & Cross, 2002).

Waitoller et al. (in press) recently conducted a systematic search, identification, and review of the research on disproportionate representation published between 1968 and 2006. Waitoller et al. found three explanations of the problem in the identified studies. About one third of the studies focused on sociodemographic traits of students and/or the contexts in which they were educated. This research examined the predictive power of various student (e.g., race, poverty status), contextual (e.g., school poverty level, district and school racial enrollment, parent income and education), sociodemographic, health, and economic variables. The majority of these studies were published in special education journals, had a national focus, covered all high-incidence disabilities, and relied on secondary databases (e.g., Office for Civil Rights, National Center for Education Statistics). The second explanation accounted for 5% of the selected studies and was concerned with the sociohistorical contexts of disproportionality. These studies did foreground the role of power and the structural nature of race in the United States to understand disability identification patterns. Some of the structural factors examined in this work included household income and level of education and school desegregation policies. These studies were published in sociology of education journals, used quantitative analysis methods, and had a national focus.

Finally, the most prevalent explanation (accounting for about two thirds of the selected studies) was concerned with the role of professional practices. These studies concentrated on one or several of the professional processes (e.g., referrals, assessment, eligibility meetings) that lead to special education placement, and occasionally aimed to gauge the mediating role of professionals' beliefs in decision-making processes. Most of these studies were published in special education journals. This group of studies was highly diverse in terms of methodological approaches and settings. Researchers relied on an array of quantitative and qualitative methods such as grounded

theory, discourse analysis, inferential statistics, and case study methods. These studies used primary and secondary evidence; sometimes researchers used simulations. There were studies with a national scope as well as research conducted at the classroom and school levels. It is interesting to note that research on professional processes leading to disproportionality constitutes the bulk of the empirical knowledge base considering that the NRC report (Donovan & Cross, 2002) pointed out that this line of work has rendered mixed results (Skiba, personal communication, May 5, 2009).

Our analysis led us to formulate the following three claims:

1. Fragmented visions of culture permeate explanations of the problem.
2. The attention to culture in disproportionality explanations is discontinuous, ranging from simplistic to sophisticated perspectives.
3. The roles culture plays in learning are underspecified in disproportionality explanations.

We used insights from cultural-historical theory (Gallego, Cole, & Laboratory of Comparative Human Cognition, LCHC, 2001) to analyze how assumptions about and definitions of culture are implicitly and (sometimes) explicitly addressed in this research. We defined culture as "an historically unique configuration of the residue of the collective problem solving activities of a social group in its efforts to survive and prosper within its environment" (Gallego et al., 2001, p. 12). We also assumed culture is constituted by interdependent aspects described as *interpretive*, *regulative*, and *instrumental* (Erickson, 2001). We define and allude to these aspects of culture as we present our analysis in the following subsections.

FRAGMENTATION IN VIEWS OF CULTURE

We identified at least three views of culture in the explanations of disproportionate representation that reflect a fragmented conceptual terrain. One such vision is "culture as a way of life" (Eisenhart, 2001). In this view, the *regulative* aspect of culture (as indexed by rules, roles, and prescriptions for navigating the world) is stressed. A *regulative* emphasis in this view assumes culture is located in the psyche of individuals (knowledge, beliefs, val-

ues) as well as in a group's conventions and expectations for everyday life conduct. Institutions also rely on a culture's *regulative* aspects to function and survive. Thus, it is assumed culture is developed as a group copes with external circumstances. This means group members share the same tools and agree to abide by the same regulatory mechanisms because they develop unique ways to behave, talk, interact, dress, eat, and the like. Hence, a shared identity and worldview are crafted and transmitted to subsequent generations raised in a cultural group.

This view of culture is reflected in discussions that stress home-school cultural differences that tend to be highlighted in disproportionality studies on sociodemographic traits of students and their families as well as research on certain professional practices (e.g., teacher referrals, assessment bias; Waitoller et al., in press). It is argued that schools are governed by specific cultural assumptions that privilege White, middle-class values and perspectives that put students from historically underserved groups at a disadvantage because they bring to school different cultural tool kits. Unfortunately, the argument follows, the dominant (school's or teacher's) cultural frame is used to make decisions about highly consequential matters, such as what counts as learning, who exhibits disruptive behavior, and who is disabled.

Another instance of the view of culture as a way of life is found in the latest NRC report. Donovan and Cross (2002) recommend "Teachers should be familiar with the beliefs, values, cultural practices, discourse styles, and other features of students' lives that may have an impact on classroom participation and success and be prepared to use this information in designing instruction" (p. 373). Apparent in this view is an emphasis on cultural patterning in which group cohesion and between-group differences are clearly demarcated. This view, reiterated in a subsequent paragraph, advised, "Understanding the cultural, gender, and other differences in how individual students learn is also an essential skill for effective teaching" (p. 374).

A second perspective on culture used in explanations of disproportionate representation can be framed as a special case of the way-of-life view. It treats culture as merely a marker in which cate-

gorically defined variables such as race or social class are assumed to have a main effect on people's thinking and behaviors. The marker view assumes that membership in a group defines a cultural protocol that individuals within the group use in everyday routines. The way-of-life model at least acknowledges some dynamic aspect of culture reflected in the shared history of cultural practices that led a group to adapt to external conditions. The marker view of culture is seemingly more deterministic in the envisioned role of culture in human actions. Studies on professional practices—specifically, research on teacher bias and prejudice—illustrates the marker view of culture. Typically, this work examines whether teacher “cultural traits” such as race or social class influence teachers’ behaviors (e.g., praise) or judgments about student future performance, or special education referral decisions. Student or teacher race, and child English proficiency, gender, and/or social class presumably mediate these decisions and behaviors. Additional examples of this perspective on culture are found in the research on

how teacher perceptions influence students’ future performance . . . [e.g.,] significant differences [have been reported on] the impact of teacher perceptions on the students by race/ethnicity, with an impact on both test scores and grades for [B]lack students three times that of [W]hites. This suggests that [B]lack students may be more vulnerable to teacher perceptions than are [W]hites. (Donovan & Cross, 2002, p. 182)

Yet, a third perspective on culture foregrounds its *interpretive* aspect. In this view, cultures afford (and constrain) how individuals and groups make sense of and interpret everyday events. Cultures offer categories and cognitive tools inscribed in psychological and material artifacts that enable people to act, think, relate, and inhabit the world. People navigate social worlds with cultural frames, and negotiate meaning, roles, and rules. Consequences of such interpretivist processes are that individuals create new meanings, may learn cultural practices, and acquire novel means to interpret social events (Erickson, 2001). Research based on this view of culture is virtually nonexistent in the disproportio-

nate representation scholarship. A few important exceptions are worth mentioning. For instance, Harry, Klingner, and Hart (2005) reported a study on school personnel beliefs about African American families living in poverty. The evidenced lack of knowledge about families and the expressed negative beliefs of study participants were assumed to mediate (perhaps determine) their interactions with these families.

Despite the lack of attention to this aspect of culture, it is interesting that the recent NRC report hints at the possibility that *interpretive* processes mediate the construction of disproportionality as it is asserted “perceptions of behavioral appropriateness are colored by cultural expectations” (Donovan & Cross, 2002, p. 197). The evidence on African American students’ disproportionate representation in school disciplinary sanctions and suspensions is used to support the hypothesis that such trends, “may reflect lower tolerance of behavioral infractions by [B]lack students as well as misinterpretation of behavioral styles that are cultural or reactive rather than pathological in nature” (p. 198). The report’s recommendations also reflect an interpretivist inclination. For example, with regard to training programs for teachers and school psychologists, Donovan and Cross (2002) recommended, “Recognizing and working with implicit and explicit racial/ethnic stereotypes should be incorporated” (p. 374).

On the other hand, similar to an exclusive focus on the *regulative* aspect of culture, an emphasis on *interpretive* issues could give a deterministic flavor to this work because of the assumption that cultural groups’ socialization will dictate people’s engagement with the world (e.g., all Latina/o students have a context dependent learning style). Similarly, an isolated emphasis on this aspect of culture has the potential to narrowly focus cultural analyses on interpersonal processes because researchers could implicitly assume culture’s sphere of influence is located in social spaces (e.g., racial prejudice is reduced to a person’s psychological response to others that are different from him or her); thus, leaving out the historical and structural layers of culture.

DISCONTINUITIES IN CULTURE VIEWS

A second theme in our analysis suggests discontinuities were apparent in how culture was defined in this literature. Specifically, we observed culture was at times addressed in rather complex ways, whereas in other instances, the concept was defined superficially. To illustrate, Donovan and Cross (2002) explained that student factors and school contexts interact to influence student achievement and behavior (e.g., poverty rates concentrated in poorly funded and inadequately staffed schools). The report acknowledged

Social, economic and environmental factors are important because they affect the nature of the interactions between children and the influential adults in their lives—in the current context, the teacher. The weight of the burden in improving school outcomes for minority students, then, falls on the interactions in the classroom. (p. 372)

In this way, the report reminds us that structure and biography (i.e., structural and individual forces) meet in social contexts, most frequently in the classroom, where students spend a sizable portion of the school day.

Although this point was not developed, it is an important insight because placing the burden on social interactions opens a space, at least theoretically, for the examination of the *instrumental* aspect of culture. This aspect helps us formulate a more dynamic model that transcends the seemingly deterministic emphasis on single aspects of culture, namely, the *regulative* or *interpretive*; that is why we mentioned earlier that these three aspects are interdependent and mutually constitute the idea of culture. People belong to multiple cultural groups, and, thus, they must actively decide how to orchestrate *regulative* and *interpretive* cultural resources. For this reason, history of *participation* in a group's *practices* is a key concept. This situated perspective reminds us that individuals enter everyday events with cultural tool kits they learned in their communities (*interpretive* aspect), and their actions are shaped by established regulatory processes and assumptions (*regulative* aspects). The idea of practice as the unit of analysis integrates an analytic focus on agency and structure that is central to the *instrumental* aspect of culture. As Artiles and Dyson (2005) explain:

As people navigate the regularities of a cultural community, tensions arise between the traditional cultural practices and the emergent goals that are shaped by the specific circumstances surrounding local events. Individuals negotiate these tensions by using their agency (use cultural resources) to adapt to ecological factors, resist local demands, or renew cultural legacies. It is important, therefore, to understand people's use of cultural rules and meaning-making processes as always mediated, not only by their individual tool kits and the cultural norms of their community, but also by the *immediate contexts and ecological circumstances in which events take place* [emphasis added]. This is how the dialectic of cultural stability is crafted, how cultural production and reproduction co-exist. (p. 48)

Thus, the NRC report's insight is critical because it promises to acknowledge this *production-oriented* notion of culture in which researchers could study negotiation processes in the social worlds of classrooms and schools. This conceptual insight affords us the possibility to document how the pressure to reproduce inequality (via the weight of structural factors) collides with the possibilities of agency (through individuals' actions); in other words, it enables us to study the tensions between cultural production and reproduction (Artiles, 2003).

Although the NRC recognized this critical theoretical insight, we did not locate a disproportionality study that reflects this orientation. Ethnographic studies that capitalized on the interplay of the *regulative*, *interpretive*, and *instrumental* aspects of culture have offered us a glimpse of the significant potential of this line of work to understand the educational experiences of students from historically underserved groups or the processes that lead to special education placement (McDermott, Goldman, & Varenne, 2006; Rueda & Mehan, 1986).

We also found that the disproportionality literature relied on less sophisticated understandings of culture. For example, many studies on teacher referral biases assumed a teacher's upbringing in an ethnic group would be a key determinant of how he or she would think, make decisions, and act; hence, studies have been carried out to check if teacher ethnicity affects student referral deci-

sions. In this view, culture, ethnicity, and acting and thinking in the world have a linear connection. We speculate the theoretical shifts from a complex view of culture (one that embodies the dialectics of reproduction and change) to a perspective that locates the onus on the individual or on ways of life are a reflection of the multiple paradigms on learning, culture, and research represented in this literature. These theoretical shifts make visible the chasm between sociocultural and individual understandings of human development and learning favored by various research communities. We return to the issue of theoretical integrity in the final section of this article.

CULTURE IN LEARNING: LACK OF SPECIFICITY AND THE INDIVIDUAL TRAIT HYPOTHESIS

There are assumptions about the role of culture in learning embedded in explanations of disproportionality. For instance, implicit in disproportionality research based on culture as way-of-life are two visions of how culture is linked to learning, namely, through socialization or deprivation processes; both visions are interrelated aspects of a deficit-based paradigm. Children either learn skills and dispositions that are not useful for school learning as they are socialized in their cultural communities or the children's culture prevents them from learning certain skills, habits, or values that prepare them for success in school (deprivation). The premise in the cultural deprivation hypothesis is that living under certain conditions (e.g., poverty) exposes children to cultural practices that limit the acquisition of normative bodies of knowledge, dispositions, as well as skills, and limits access to experiences that are valued by the dominant society. In this view, "the culture of poverty" deprives children of sound developmental experiences and becomes destiny. A significant limitation of these views is that the processes or mechanisms through which culture enters learning to mediate socialization or cultural deprivation are not specified. Hence, these two understandings of the roles of culture in learning are problematic on two counts: they rely on limited definitions of culture and lack theoretical specificity.

In the final analysis, the socialization and deprivation perspectives stress negative views of historically underserved communities' lives. Children living in these communities are either socialized to negative practices because of their socioeconomic conditions or the living conditions are so dismal that the children are prevented from developing the skills and dispositions they need to succeed in mainstream society. Examples of these views are found in the NRC report's discussion of influences on cognitive and behavioral development. This chapter focuses on the

circumstances that diminish achievement—or shift the location of the [normal distribution of achievement] back, as in the *subpopulation* for those developing in high risk environments. This shift . . . increases the number of children with special needs at the lower end. (Donovan & Cross, 2002, p. 97, emphasis in original)

Examples of deprivation views include: "Poverty is highly correlated with single-parent status, decreasing the parental attention available to the child" (p. 122), and "Persistent poverty, is strongly correlated with less optimal home environments" (p. 123). Statements that index a socialization perspective include: "The effects of poverty on the home environment may be manifested in parenting practices . . . social disadvantage predicted harsh parental discipline, which in turn predicted aggressive child behavior" (p. 123).

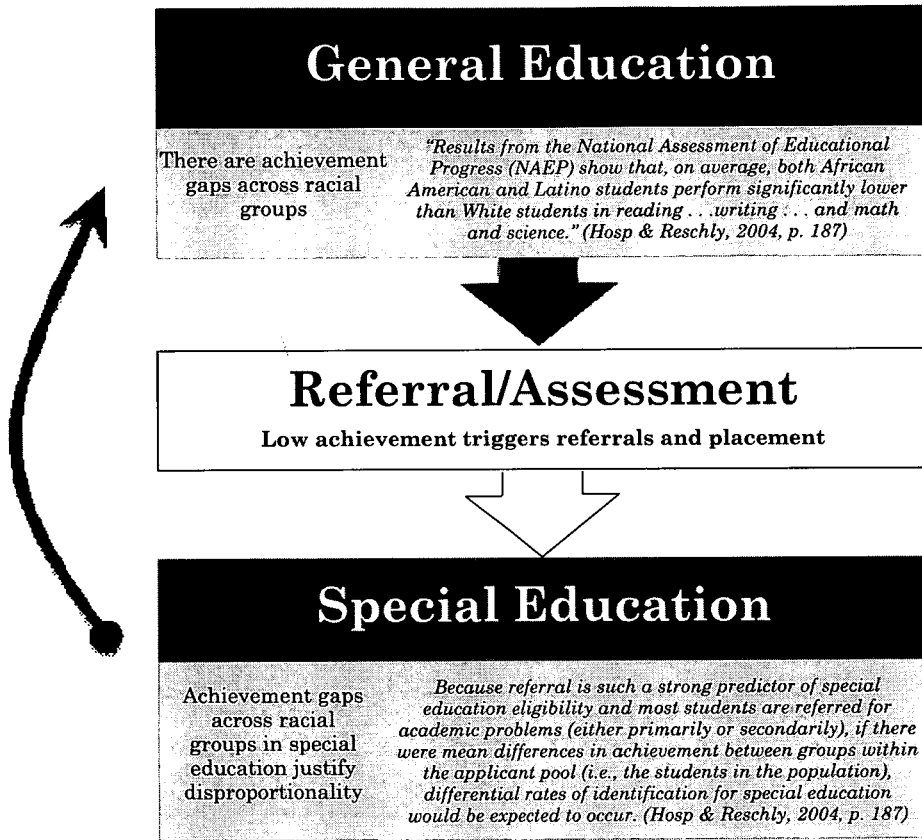
A third perspective on the link between culture and learning is represented in the so-called "equal treatment" approach. This approach is based on the following reasoning:

Mean achievement differences between groups of students would lead to disproportionate rates of identification even if the processes of referral, assessment, and certification were perfectly nonbiased. Therefore, a comprehensive examination of disproportionate representation in special education eligibility must address mean differences in achievement levels disaggregated by race. (Hosp & Reschly, 2004, p. 188)

Based on findings from three studies, one of which is briefly discussed, the NRC report suggests, "[B]lack students had a greater number of [academic and behavior] problems and more

FIGURE 1

Reasoning Underlying Equal Treatment Studies



severe problems than [W]hite students" (Donovan & Cross, 2002, pp. 77–78). The report concluded, "Findings in this equal treatment study suggest that minority students must demonstrate greater need in order to receive special supports" (p. 78).

There are several issues with the equal treatment approach. First, the approach is grounded in circular reasoning as represented in Figure 1. That is, if a statement of fact such as an achievement gap based on race exists in general education and low achievement is one of the most likely reasons that a child is referred, assessed, and placed in special education, therefore, finding racial achievement gaps in special education is to be expected. It is interesting to note that research findings do not always support some of the equal treatment approach's core premises (e.g., academic variables had a weaker special education placement

predictive value than other predictors) or are contradicted by other studies. For instance, Hosp and Reschly (2004) found that a demographic model had the greatest predictive value for Latinos in EBD and LD. The academic model was "stronger for African American and Asian/Pacific Islander students than for Latino or American Indian students" (p. 194) and its predictive value varied by disability. It is important to note that, "the academic block of predictors was generally the weakest of the three blocks" (p. 194).

Another equal treatment study based on data from four school districts assessed whether placement restrictiveness varied by racial group (Hosp & Reschly, 2001). The authors concluded, "The finding that there were few interactions between race and other variables suggests that the process of determining restrictiveness of placement is similar for African-

American and Caucasian students with disabilities"; hence, "generally there was equal treatment of African American and Caucasian students with LD for this sample" (p. 232). At the same time, the authors warned, "Although overall the same variables were found to be important in determining the amount of time spent outside the general education classroom for both African-American and Caucasian students, this does not prove equal treatment" (p. 236). (It is important to bear in mind the study limitations related to sampling and data analysis procedures as acknowledged by the authors in p. 236). In contrast, several studies have reported that historically underserved students tend to be placed in more restrictive settings than their White counterparts with the same disability (see Skiba et al., 2008, for a review of these studies).

Moreover, a central problem in this line of work is that it naturalizes the achievement gaps observed in general education between groups because consequential questions about the historical precursors (e.g., opportunity to learn) or the cultural loadings of performance measures are not raised. The nature or magnitude of the problem as reflected in scores from standardized tools are black boxed (Bowker & Star, 1997), thus erasing any vestige of tool validity questions or the socio-culturally loaded practices carried out to assess student performance and diagnose disabilities. These are serious omissions considering the emergence of experimental evidence on the role of stereotype threat in assessment practices. Osborne (2007) examined the notion that students from historically underserved groups are aware of the negative stereotypes that are held about their ability and performance. When placed in assessment situations, concerns about these stereotypes intrude into the testing context and produce situational anxieties and physiological responses that compromise test performance (Osborne, 2007). First introduced by Claude Steele in the 1990s, it has been validated in at least 100 experimental studies conducted in a variety of contexts suggesting that achievement gaps are mediated in part by testing situations (e.g., Steele & Aronson, 1995). This work is crucial in this discussion because it calls attention to the interplay between the consequences of historical legacies of oppression related to difference markers such as race and social class

and assessment situations and practices. The equal treatment approach seems to take for granted achievement test scores and other assessment evidence and seems to assume these data are benign and accurate indices of performance. Similarly, this perspective implicitly equates low achievement with need for special education services.

In addition, the equal treatment approach seemingly endorses a deficit-oriented *student centered* view of learning (Bransford, Brown, & Cocking, 2000) in which race or ethnicity are used to explain educational performance. This perspective uses standardized assessment results (e.g., achievement data) as evidence that only students from historically underserved groups with greater needs are placed in special education. As we explained earlier, a circular logic is used to "prove" that learning is delayed in students from historically underserved groups. Does this approach imply that these students' placement in special education is justified?

IMPLICATIONS AND FUTURE DIRECTIONS

We outline in this section three implications that provide practitioners with theoretical insights to understand and engage their practice in ways that honor the view of schooling as cultural practice. These implications also call on the research community to partner with their colleagues in ways that uncover, explore, and embrace cultural perspectives in the conduct of research, the interpretation of its findings, and the use of research knowledge to change professional practice.

THEORETICAL CANDOR AND INTEGRITY

Some of the NRC report's answers to its guiding questions are tentative (see Donovan & Cross, 2002, pp. 357–359), which compels us to focus on an issue that remained in the background of our analysis—namely, the theoretical underpinnings of research questions. It seems that when learning is conceptualized as an individual process, the task of documenting child factors is relatively straightforward; fairly clear answers can be obtained in such studies. However, when issues of context and institutional and interpersonal processes are included in research questions, it is not

clear whether researchers used research methods and/or theoretical frameworks that would enable them to capture systematically the link between mind, history, and society. We also do not know whether differences in the theoretical lenses used in studies that rendered contradictory findings contributed to the conflicting results. Finally, it is not clear whether the absence of data on certain matters could be addressed by (a) using theoretical frameworks in future research that honor the complexities of individuals learning in sociohistorical and cultural contexts; (b) engaging practitioners as well as families and youth of color in the conceptualization, operationalization, and analysis of research; and (c) expanding the scope of the analyses to align with research on disparities in health, mental health, juvenile justice, child welfare, and postsecondary education.

It is critical that researchers concerned with disproportionality both articulate explicitly the theoretical frameworks that can help us understand the multilayered nature of this predicament and include other voices and data sources in the research. Efforts should be made to align the theoretical basis of our evolving understanding of the problem with recommendations for future work and solutions. Attention to such a link is key in scientific communities as researchers are expected to build on the accumulated knowledge on a given problem to guide future work, which, in turn, will expand contemporary insights and inform applications of the extant knowledge base.

*USE THE CURRENT KNOWLEDGE BASE
TO CHART A RESEARCH PROGRAM
WITH CULTURE IN MIND*

We argue that researchers can address the current knowledge gaps to design a research program that is mindful of culture and provides actionable data and analyses that can inform practice. Let us take, for example, the case of bias that is frequently mentioned in this scholarship. The 2002 NRC report concluded,

the evidence available is insufficient to support a claim that *either* discrimination does or does not play a significant role. And if discrimination is operative, whether its consequence is excessive placement of minority student in special education or denial of spe-

cial education service to minority students is unclear. (p. 78, emphasis in original)

It is critical that researchers concerned with disproportionality both articulate explicitly the theoretical frameworks that can help us understand the multilayered nature of this predicament and include other voices and data sources in the research.

One key limitation of this discussion is that studies implicitly tend to frame bias as a binary notion, "Is it school personnel's fault or do children have severe enough deficits?" A research program that has culture in mind would transcend this dualism as it would compel us to examine bias not only as the result of individuals' actions or performance, but as cultural processes or practices enacted in institutional contexts. For example, there are high-stakes social precursors of assessment results (e.g., classroom interactions, the social contexts of assessment sessions) that can help us understand institutional bias. These precursors are malleable and if changed, may change assessment results. For example Kellam, Mayer, Rebok, & Hawkins (1998) demonstrated that poor classroom management in first grade exacerbates behavioral problems for students who were at risk of behavioral outcomes. Similarly, Pianta, Hamre, & Stuhlman (2003) have shown how positive relationships between first grade teachers and their students affect subsequent academic outcomes. These factors may be particularly important for students of color. For example, Battistich, Schaps, & Wilson (2004) have demonstrated the disproportionately powerful impact of the Caring Schools Community intervention on children of color.

Similarly, there are structural forces that shape students' academic achievement. These forces include class size, the proportion of resources allocated to student support, cultural competency, and the disconnect between schools and families (Osher, Dwyer, & Jimerson, 2006). For example, Tennessee's class size reduction experiment demonstrated how significantly reduc-

ing class size in K-3 classes had beneficial short- and long-term outcomes for children of color (Mosteller, 1995). Conversely many children of color attend "truly disadvantaged schools," where the needs of the students exceed the capacity of schools to address those needs (Sebring, Allensworth, Bryk, Easton, & Luppescu, 2006), which leads to a disproportionate reliance on special education placements (Kendziora & Osher, 2009). The fact that these precursors and structural factors are infrequently represented in disproportionality studies leads to the type of particularistic research, which Ryan (1971) conceptualized as "Blaming the Victim."

An explicit attention to culture along with a more complex theoretical understanding of the construct will enable us to transcend blaming individuals and assist us to understand the complex social and cultural worlds of schools. Moreover, a view of culture that acknowledges the role of power and of context will also help us document the construction of inequality and provide insights for a more constructive goal for educational researchers and practitioners—namely, institutional transformation, which must address multiple factors including:

- The structure of schools, which affects student-teacher connectedness.
- The cultural competence and social emotional capacities of all school personnel (Jennings & Greenberg, 2009), which affects relationships with students and their families.
- The quality and amount of student support provided to address barriers to learning.
- The quality of the academic and social emotional curricula and instruction.
- The relationship between the school and community members of color.

*TRACE THE TRAJECTORIES OF RESEARCH
KNOWLEDGE USE IN PRACTICE:
MODELING ACTIVITY SETTINGS*

We challenge the naïve argument that the availability of research knowledge changes professional practices because it assumes that professionals' work consists solely of the application of technical knowledge. For instance, the 2002 NRC report

(Donovan & Cross, 2002) concluded, "There is ample evidence . . . that the growth in knowledge about effective teaching and learning has not begun to significantly impact the practices of educators, administrators, and support services personnel in many schools" (pp. 355-356). According to the report, the problem is that research knowledge has not reached teachers' daily practices, largely because of "the inadequacy of educator preparation programs and professional development activities" (p. 356). A limitation of this conclusion is that it relies on a transmission view of professional learning that has little impact on how professionals learn about their work.

We suggest an alternative perspective. We explained earlier that accounting for the interlocking of *regulative*, *interpretive*, and *instrumental* aspects of culture afford researchers the use of a practice-based model of culture. It is critical that future disproportionality research on professional practices draw from this contemporary scholarship (Cole, 1996). These theories compel researchers to understand learning as situated in complex cultural historical contexts in which individual, interpersonal, and institutional processes must be accounted for (Rogoff, 2003). Moreover, these theoretical developments are beginning to inform research on professional learning, shedding light on the shortcomings of transmission models, and advancing evidence about the complexities of how teachers learn to use research knowledge and enact reform mandates (see Grossman, Wineburg, & Woolworth, 2001; Trent, Kea, & Oh, 2008 for research examples and critical reviews of this work).

CONCLUSION

Research and practice in special education has been based on limited views of culture that are a-historical and rely on proxy indicators such as race and ethnicity. The limitations of equating culture with people's traits are significant (Gutiérrez & Rogoff, 2003) and have potentially damaging implications for future research and policy. As Tate, Ladson-Billings and Grant (1996) explained in their analysis of the implementation of *Brown v. Board of Education*, we should not mathematize social problems with deep structural roots because

such calculations are not likely to unearth the historical precursors and ideologically laden processes that constitute them.

We assume disproportionality is a symptom of larger cultural and historical processes that shape the educational experiences and opportunities of students from historically underserved groups. Our analysis suggests that a more complex, dynamic, and historical perspective on culture can assist us to understand better this long-standing predicament. More important, such a view of culture can inform future research priorities and policy making in general and special education; document how special education practice, research, and policy is enacted in racially and economically stratified schools and communities; and lead to significantly improved educational outcomes for students from historically underserved groups.

REFERENCES

- Adams, G., Biernat, M., Branscombe, N. R., Crandall, C. S., & Wrightsman, L. S. (2008). Beyond prejudice: Toward a sociocultural psychology of racism and oppression. In G. Adams, M. Biernat, N. R. Branscombe, C. S. Crandall, & L. S. Wrightsman (Eds.), *Commemorating Brown: The social psychology of racism and discrimination* (pp. 215–246). Washington, DC: APA Books.
- Artiles, A. J. (2003). Special education's changing identity: Paradoxes and dilemmas in views of culture and space. *Harvard Educational Review, 73*, 164–202.
- Artiles, A. J. (2008, April). *The future of disproportionality: Toward a new generation of equity research in ability differences*. Paper presented at the "Changing conceptions of special education conference: Past, present, and future." University of Delaware, Newark, NJ.
- Artiles, A. J., & Dyson, A. (2005). Inclusive education in the globalization age: The promise of comparative cultural historical analysis. In D. Mitchell (Ed.), *Contextualizing inclusive education* (pp. 37–62). London, England: Routledge.
- Artiles, A. J., Osher, D., & Ortiz, A. (2003, April). "Context" and "culture" in the 2002 NRC report: Challenges and risks for future special education research and practice. Paper presented at the annual meeting of the American Educational Research Association. Chicago, IL.
- Artiles, A. J., Rueda, R., Salazar, J., & Higuera, I. (2005). Within-group diversity in minority disproportionate representation: English Language Learners in urban school districts. *Exceptional Children, 71*, 283–300.
- Artiles, A. J., & Trent, S. C. (1994). Overrepresentation of minority students in special education: A continuing debate. *The Journal of Special Education, 27*, 410–437.
- Artiles, A. J., Trent, S. C., & Kuan, L. A. (1997). Learning disabilities research on ethnic minority students: An analysis of 22 years of studies published in selected refereed journals. *Learning Disabilities Research & Practice, 12*, 82–91.
- Artiles, A. J., Trent, S. C., & Palmer, J. (2004). Culturally diverse students in special education: Legacies and prospects. In J. A. Banks & C. M. Banks (Eds.), *Handbook of research on multicultural education* (2nd ed., pp. 716–735). San Francisco, CA: Jossey Bass.
- Battistich, V., Schaps, E., & Wilson, N. (2004). Effects of an elementary school intervention on students' "connectedness" to school and social adjustment during middle school. *Journal of Primary Prevention, 24*, 243–262.
- Blackorby, J., Wagner, M., Cameto, R., Davies, El., Levine, P., Newman, L., . . . & Sumi, C. (2005). *Engagement, academics, social adjustment, and independence*. Palo Alto, CA: SRI.
- Bowker, G., & Star, S. L. (1997). How things (actor-net) work: Classification, magic and the ubiquity of standards. *Philosophia, 25*(3–4), 195–220.
- Bransford, J., Brown, A. L., & Cocking, R. (2000). *How people learn: Brain, mind, experience, and school*. Washington, DC: National Academy Press.
- Brown v. Board of Educ., 347 U.S. 483 (1954).
- Cartledge, G., Singh, A., & Gibson, L. (2008). Practical behavior-management techniques to close the accessibility gap for students who are culturally and linguistically diverse. *Preventing School Failure, 52*, 29–38.
- Coalition to Save Our Children v. State Board of Education of Delaware, 901 F. Supp. 784, 821 (D. Del. 1995); 90F.3rd 752, 763 n. 13 (3d. Cir. 1996).
- Cole, M. (1996). *Cultural psychology*. Cambridge, MA: Harvard University Press.
- Cortiella, C. (2007). *Rewards and roadblocks: How special education students are faring under No Child Left Behind*. New York, NY: National Center for Learning Disabilities.
- Donovan, S., & Cross, C. (Eds.). (2002). *Minority students in special and gifted education*. Washington, DC: National Academy Press.

- Eisenhart, M. (2001). Changing conceptions of culture and ethnographic methodology. In V. Richardson (Ed.), *Handbook of research on teaching* (4th ed., pp. 209–225). Washington, DC: American Educational Research Association.
- Eitle, T. M. (2002). Special education or racial segregation: Understanding variation in the representation of black students in educable mentally handicapped programs. *The Sociological Quarterly*, *43*, 575–605.
- Erickson, F. (2001). Culture in society and in educational practices. In J. Banks & C. M. Banks (Eds.), *Multicultural education: Issues and perspectives* (pp. 31–58). New York, NY: Wiley.
- Ferri, B. A., & Connor, D. J. (2005). Tools of exclusion: Race, disability, and (re)segregated education. *Teachers College Record*, *107*, 453–474.
- Fierros, E. G. & Conroy, J. (2002). Double jeopardy: An exploration of restrictiveness and race in special education. In D. Losen & G. Orfield (Eds.), *Racial inequity in special education* (pp. 39–70). Cambridge, MA: Harvard Education Press.
- Fiske, S. T. (2004). Intent and ordinary bias: Unintended thought and social motivation create casual prejudice. *Social Justice Research*, *17*, 117–127.
- Friesen, B. J., & Osher, T. W. (1996). Involving families in change: Challenges and opportunities. *Special Services in the Schools*, *11*, 187–207.
- Gallego, M. A., Cole, M., & Laboratory of Comparative Human Cognition. (2001). Classroom cultures and cultures in the classroom. In V. Richardson (Ed.), *Handbook of research on teaching* (4th ed., pp. 951–997). Washington, DC: American Educational Research Association.
- Graham, S. (1992). "Most of the subjects were white and middle class" Trends in published research on African Americans in selected APA journals, 1970–1989. *American Psychologist*, *47*, 629–639.
- Grossman, P., Wineburg, S., & Woolworth, S. (2001). Toward a theory of teacher community. *Teachers College Record*, *103*, 942–1012.
- Gutiérrez, K. D., & Rogoff, B. (2003). Cultural ways of learning: Individual traits or repertoires of practice. *Educational Researcher*, *32*(5), 19–25.
- Harry, B., Klingner, J., & Hart, J. (2005). African-American families under fire: Ethnographic views of families' strengths. *Remedial and Special Education*, *12*(2), 101–112.
- Heller, K. A., Holtzman, W., & Messick, S. (Eds.). (1982). *Placing children in special education: A strategy of equity*. Washington DC: National Academy Press.
- Henderson, C. (2001). *College freshmen with disabilities, 2001: A biennial statistical profile*. Washington, DC: American Council on Education.
- Hosp, J. L., & Reschly, D. J. (2001). Predictors of restrictiveness of placement for African-American and Caucasian students. *Exceptional Children*, *68*, 225–238.
- Hosp, J. L., & Reschly, D. J. (2003). Referral rates for intervention or assessment: A meta-analysis of racial differences. *Journal of Special Education*, *37*, 67–80.
- Hosp, J. L., & Reschly, D. J. (2004). Disproportionate representation of minority students in special education: Academic, demographic, and economic predictors. *Exceptional Children*, *70*, 185–199.
- Jennings P. A., & Greenberg, M. T. (2009). The pro-social classroom: Teacher social and emotional competence in relation to student and classroom outcomes. *Review of Educational Research*, *79*, 491–525.
- Kellam, S. G., Mayer, L. S., Rebok, G. W., & Hawkins, W. E. (1998). Effects of improving achievement on aggressive behavior and of improving aggressive behavior on achievement through two preventive interventions. In B. P. Dohrenwend (Ed.), *Adversity, stress, and psychopathology* (pp. 486–505, 567). New York, NY: Oxford University Press.
- Kemp, S. (2006). Dropout policies and trends for students with and without disabilities. *Adolescence*, *41*, 235–250.
- Kendziora, K., & Osher, D. (2009). *Turning truly disadvantaged schools around: A summative evaluation of the Safe Schools Successful Students Initiative*. Washington, DC: American Institutes for Research.
- Klingner, J., Artiles, A. J., Kozleski, E., Harry, B., Zion, S., Tate, W., . . . & Riley, D. (2005). Addressing the disproportionate representation of culturally and linguistically diverse students in special education through culturally responsive educational systems. *Education Policy Analysis Archives*, *13*(38). Available at <http://epaa.asu.edu/epaa/v13n38>
- Komenski, R., Jamieson, A., & Martinez, G. (2001). *At-risk conditions of U.S. school-age children*. [Working paper series No. 52]. Washington, DC: U.S. Bureau of the Census, Population Division.
- Losen, D., & Orfield, G. (Eds.). (2002). *Racial inequity in special education*. Cambridge, MA: Harvard Education Press.
- MacMillan, D., & Reschly, D. (1998). Overrepresentation of minority students: The case for greater specificity or reconsideration of the variables examined. *The Journal of Special Education*, *32*, 15–24.

- McDermott, R., Goldman, S., & Varenne, H. (2006). The cultural work of learning disabilities. *Educational Researcher*, 35(6), 12–17.
- Mercer, J. R., & Richardson, J. G. (1975). Mental retardation as a social problem. In N. Hobbs (Ed.), *Issues in the classification of children* (Vol. 2, pp. 463–496). San Francisco, CA: Jossey-Bass.
- Mosteller, F. (1995). The Tennessee study of class size in the early school grades. *The Future of Children*, 5, 113–127.
- National Institute for Urban School Improvement. (2008). *Disproportionality by race and LRE*. Retrieved from: <http://nccrest.eddata.net/data/index.php?id=70>
- O'Connor, C., & Fernandez, S. D. (2006). Race, class and disproportionality: Reevaluating the relationship between poverty and special education placement. *Educational Researcher*, 35(6), 6–11.
- Osborne, J. (2007). Linking stereotype threat and anxiety. *Educational Psychology*, 27, 135–154.
- Osher, D., Cartledge, G., Oswald, D., Artiles, A. J., & Coutinho, M. (2004). Issues of cultural and linguistic competency and disproportionate representation. In R. Rutherford, M. Quinn, & S. Mather (Eds.), *Handbook of research in behavioral disorders* (pp. 54–77). New York, NY: Guilford.
- Osher, D., Dwyer, K., & Jimerson, S. (2006). Foundations of school violence and safety. In S. Jimerson and M. Furlong (Eds.), *Handbook of school violence and school safety: From research to practice* (pp. 51–71). Mahwah, NJ: Lawrence Erlbaum.
- Osher, D., Woodruff, D., & Sims, A. (2002). Schools make a difference: The overrepresentation of African American youth in special education and the juvenile justice system. In D. J. Losen & G. Orfield (Eds.), *Racial inequities in special education* (pp. 93–116). Cambridge, MA: Harvard Education Press.
- Oswald, D. P., Coutinho, M. J., Best, A. M., & Singh, N. N. (1999). Ethnic representation in special education: The influence of school-related economic and demographic variables. *The Journal of Special Education*, 32(1), 194–206.
- Parrish, T. (2002). Racial disparities in the identification, funding, and provision of special education. In D. J. Losen & G. Orfield (Eds.), *Racial inequities in special education* (pp. 15–37). Cambridge, MA: Harvard Education Press.
- Patton, J. M. (1998). The disproportionate representation of African Americans in special education: Looking behind the curtain for understanding and solutions. *The Journal of Special Education*, 32(1), 25–31.
- Pennsylvania Association for Retarded Children ([PARC] v. Commonwealth of Pennsylvania, 343 F. Supp. 279 (1972).
- Pianta, R. C., Hamre, B., & Stuhlman, M. (2003). Relationships between teachers and students. In W. M. Reynolds & G. E. Miller (Eds.), *Comprehensive handbook of psychology* (Vol. 7, pp. 199–234). New York, NY: Wiley.
- Quinn, M. M., Rutherford, R. B., Leone, P., Osher, D., & Poirier, J. (2005). Youth with disabilities in juvenile corrections: A national survey. *Exceptional Children*, 71, 339–345.
- Reid, D. K., & McKnight, M. G. (2006). Disability justifies exclusion of minority students: A critical history grounded in disability studies. *Educational Researcher*, 35(6), 18–23.
- Rogoff, B. (2003). *The cultural nature of human development*. New York: Oxford University Press.
- Rueda, R., & Mehan, H. (1986). Metacognition and passing: Strategic interactions in the lives of students with learning disabilities. *Anthropology & Education Quarterly*, 17, 145–165.
- Ryan, W. F. (1971). *Blaming the victim*. New York, NY: Random House.
- Schiller, E., O'Reilly, F., & Fiore, T. (2006). *Marking the progress of IDEA Implementation: The study of state and local implementation and impact of IDEA*. Bethesda, MD: Abt Associates.
- Sebring, P. B., Allensworth, E., Bryk, A. S., Easton, J. Q., & Luppescu, S. (2006). *The essential supports for school improvement*. Chicago, IL: Consortium on Chicago School Research.
- Skiba, R. J., Poloni-Staudinger, L., Simmons, A. B., Feggins, L. R., & Chung, C. G. (2005). Unproven links: Can poverty explain ethnic disproportionality in special education? *The Journal of Special Education*, 39(3), 130–144.
- Skiba, R. J., Simmons, A. B., Ritter, S., Gibb, A. C., Rausch, M. K., Caudrado, J., & Chung, C. (2008). Achieving equity in special education: History, status, and current challenges. *Exceptional Children*, 74, 264–288.
- Spencer, M. B. (2008). Lessons learned and opportunities ignored since *Brown v. Board of Education*: Youth development and the myth of a color-blind society. *Educational Researcher*, 37, 253–266.
- Steele, C. M., & Aronson, J. (1995). Stereotype threat and the intellectual test performance of African-Americans. *Journal of Personality and Social Psychology*, 69, 797–811.

Sullivan, A., & Kozleski, E. B. (2008). *Part B Annual Performance Report Analysis: Indicator 5, LRE*. Tempe, AZ: National Institute for Urban School Improvement.

Tate, W. F., Ladson-Billings, G., & Grant, C. (1996). The Brown decision revisited: Mathematizing a social problem. In M. J. Shujaa (Ed.), *Beyond desegregation: The politics of quality in African American schooling* (pp. 29–50). Thousand Oaks, CA: Corwin Press.

Trent, S. C. (2003, April). *Forty acres and a mule or no more of the same? Under-examined issues in recent accountability and special education initiatives*. Invited Presidential Symposium presented at the annual meeting of the American Educational Research Association, Chicago, IL.

Trent, S. C. (in press). Overrepresentation of culturally and linguistically diverse students in special education. In B. McGaw, P. Peterson, & E. Baker (Eds.). *The international encyclopedia of education*. Amsterdam, The Netherlands: Elsevier.

Trent, S. C., Kea, C. D., & Oh, K. (2008). Research on preparing preservice educators for cultural diversity: How far have we come? *Exceptional Children*, 74, 328–350.

U.S. Public Health Services. (1999). *Mental health: A report of the Surgeon General*. Washington, DC: Author.

U.S. Public Health Services. (2001). *Mental health: Culture, race, ethnicity: A supplement to the Surgeon General's report on mental health*. Washington, DC: Author.

Wagner, M., Newman, L., Cameto, R., Levine, P., & Garza, N. (2006). *An overview of findings from wave 2 of the National Longitudinal Transition Study-2 (NLTS2)*. Menlo Park, CA: SRI International. Retrieved from www.nlts2.org/reports/2006_08/nlts2_report_2006_08_complete.pdf

Waitoller, F., Artiles, A. J., & Cheney, D. (in press). The miner's canary: A review of overrepresentation research and explanations. *The Journal of Special Education*.

Zuberi, T., & Bonilla-Silva, E. (Eds.). (2008). *White logic, white methods: Racism and methodology*. Lanham, MD: Rowman & Littlefield.

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