CHANGING PLACES
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HOW COMMUNITIES WILL IMPROVE
THE HEALTH OF BOYS OF COLOR

Edited by Christopher Edley Jr.
and Jorge Ruiz de Velasco

With a foreword by Robert Phillips
The Chief Justice Earl Warren Institute on Race, Ethnicity and Diversity at the University of California at Berkeley School of Law is a multidisciplinary, collaborative venture to produce research, research-based policy analysis, and curricular innovation on issues of racial and ethnic justice in California and the nation.

University of California Press
Berkeley and Los Angeles, California

University of California Press, Ltd.
London, England

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Manufactured in the United States of America

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Cover: The cover image was designed by Oakland, California–based printmaker and digital artist Favianna Rodriguez. Using high-contrast colors and vivid figures, her composites reflect literal and imaginative migration, global community, and interdependence. She has lectured widely on the use of art in civic engagement and the work of bridging community and museum, local and international. Rodriguez is coeditor of Reproduce and Revolt! with stencil artist and art critic Josh MacPhee (Soft Skull Press, 2008). An unprecedented contribution to the Creative Commons, this two-hundred-page book contains more than six hundred bold, high-quality black and white illustrations for royalty-free creative use. Rodriguez’s artwork also appears in The Design of Dissent (Rockport Publishers, 2006), Peace Signs: The Anti-War Movement Illustrated (Edition Olms, 2004), and The Triumph of Our Communities: Four Decades of Mexican Art (Bilingual Review Press, 2005).
THE GEOGRAPHY OF OPPORTUNITY

A Framework for Child Development

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ABSTRACT

As they develop, children are influenced not only by their immediate family environment but also by their neighborhood and school environment. These three environments—family, neighborhoods, and schools—offer children opportunities and challenges for healthy development. This framework of multiple influences on child development, though, is missing distributional aspects—specifically, that there is a geography of opportunity structure that systematically patterns how children of various racial and ethnic groups come to reside in different family, neighborhood, and school environments. This chapter links the research on child development with research on how neighborhoods and schools affect child health and development, with attention to these distributional questions. We examine how processes of residential and school segregation result in systematic racial and ethnic differences in this child opportunity structure. The chapter concludes with an examination of the available policy options for addressing racial and ethnic inequity in the child opportunity structure.
When Natercia Dias picked up her 5-year-old son at his school bus stop in Dorchester [a predominantly black neighborhood in Boston] late Tuesday afternoon, she noticed a second young boy standing alone on the sidewalk. . . . The boy was quiet and calm, said Dias. He did not appear frightened and he did not resist when she started rifling through his backpack in search of any information that could identify him, she said. As it turned out, the kindergartner was miles from his Wellesley [a predominantly white suburb] home. . . . Thanks to Dias and other parents at the bus stop, the black kindergartner—who had been mistaken for a student in the Metco desegregation program, put on a Metco bus at the end of his after-school program in Wellesley, and dropped off in Dorchester—found his way back to his family. . . . Metco’s executive director, Jean McGuire, said this is not the first time that a minority student from the suburbs has been ushered onto Metco buses. . . . “If you assume that nobody black lives in your town, this is what’s going to happen, and it happens every year,” McGuire said.

Meghan Tench, Boston Globe, September 6, 2003

A black kindergarten student who lives in Wellesley was mistakenly put on a Metco bus and dropped off in Boston last fall because of “certain unconscious assumptions about race,” according to a report released last week by a committee that investigated the incident. . . . But the committee convened by the director of the Wellesley Community Children’s Center found no evidence of deliberate racial discrimination in the busing mix-up, according to its facilitator, Elizabeth Lemons.

Jenna Russell, Boston Globe, February 1, 2004

INTRODUCTION

There is a set of assumptions about where people live—or should live—that led someone to bus this young boy to a place where they assumed he belonged. For example, a five-year-old African American boy in the Boston metropolitan area should live in Dorchester (or Roxbury or Mattapan, which are all predominantly black neighborhoods in Boston), but not in Wellesley (a predominantly white suburb in the Boston metropolitan area). And if he happens to attend school in Wellesley, it must be because he participates in Metco—an interdistrict school racial desegregation program
created in the 1960s. Those “certain unconscious assumptions about race” are that a white child belongs in a place where schools offer him or her a wealth of opportunities to learn and develop, but a minority child does not. And if he or she attends an opportunity-rich school, the minority student must be a transplant from another place.

A few facts about Dorchester and Wellesley provide the background for these racialized assumptions about the developmental contexts of children—that is, the places where children live, play, learn, and grow. In 2000, Dorchester was 68.7 percent minority with a poverty rate of 18.4 percent, while Wellesley was 88.3 percent non-Hispanic white (and 7.2 percent Asian) with a poverty rate of 3.8 percent. During the 2004–05 school year, 73.5 percent of Boston Public School students were low-income, compared with just 3.6 percent of Wellesley public school students. During that same year Boston fourth graders’ score on the Massachusetts Comprehensive Assessment System (MCAS) Math Composite Performance Index—a 100-point scale that measures the extent to which students are progressing toward proficiency—was 59, compared with 90 in Wellesley. It is also significant that despite its value for both the children who are enrolled and the suburban schools they attend, because of the relatively small number of children who participate in the program, Metco cannot address the racial, socioeconomic, or academic imbalance among school districts in the Boston area. Approximately 3,165 Boston children are enrolled in Metco—while more than 15,000 are on the waiting list. These 3,165 children represent only about 5.7 percent of the total number of children enrolled in Boston Public Schools.

At the same time that racialized assumptions about the developmental contexts of children remain strong and pervasive, the U.S. population is becoming increasingly racially and ethnically diverse, and the child population is becoming even more diverse than the general population. The proportion of racial or ethnic minority children in the total child population increased from 26 percent in 1980 to 44 percent in 2009. Especially dramatic is the growth in the Latino child population from 9 percent to 22 percent (figure 12.1). Among children under five, 47 percent are minority, and Latino children comprise 25 percent (figure 12.2). In some geographic areas the proportion of the child population that is minority is even larger than the national figure. According to the American Community Survey (ACS) for 2005 to 2007, minority children are already half or more of the population in nine states and thirty-one metro areas. In 2008 eight of the ten largest metropolitan areas had majority-minority child populations—that is, the majority of the population was made up of children
Figure 12.1. Racial and ethnic composition of the child population, 1980–2050. Note: Hispanics may be of any race. Racial groups include only non-Hispanic members. Multirace data not available before 2000. Source: U.S. Census Bureau estimates and projections. Projections use Constant Net International Migration Series.

Figure 12.2. Racial and ethnic composition of the child population by age, 2008. Note: Hispanics may be of any race. Racial groups include only non-Hispanic members. Source: U.S. Census Bureau.
from what are traditionally called “minority” backgrounds (for example, black/African American, Latino, Asian, Native American). Among those ten largest metro areas, the proportion of racial and ethnic minority children ranged from 28.4 percent in Boston to 77.3 percent in Los Angeles.¹

Racial and ethnic disparities in the health, development, and well-being of U.S. children are large and have been persistent over time (Satcher et al. 2005). The black-white disparity in infant mortality, birth weight, and premature birth is a stark example (Osypuk and Acevedo-Garcia 2008).² Racial and ethnic disparities in child development (in cognitive and social outcomes, for example) and school readiness emerge at young ages (Farkas 2002; Rock and Stenner 2005). Racial differences in academic readiness emerge before school entry (Rock and Stenner 2005). Although racial and ethnic disparities among children are not new, such disparities affect an increasing number and proportion of U.S. children as a result of the demographic trends highlighted earlier.

Disparities in birth outcomes (such as low birth weight and infant mortality) are dramatic between black and white children but not between Latino and white children. However, some studies indicate that the initial health advantage of Latino children is eroded by age two. Although favorable early health outcomes (such as low rates of low birth weight) among Latino children are a robust finding across studies, some evidence suggests that this initial health advantage does not appear to sustain favorable cognitive development outcomes by age two (Fuller 2009; Fuller et al. 2009). The favorable birth outcomes among Latino children are partly a function of the large proportion of immigrants in this group and the fact that immigrants tend to have a better health profile than their U.S.-born counterparts (Acevedo-Garcia and Bates 2007; Acevedo-Garcia, Soobader, and Berkman 2005 and 2007). However, second-generation Latinos (that is, U.S.-born) are now contributing most of the growth of the Latino population, and by 2020 the second-generation Latino population will be larger than the first generation (that is, Latino immigrants) (Suro and Passel 2003). This may result in an erosion of health status among the Latino population, because health outcomes tend to be better among the first generation than among the second generation.

Many inequality patterns suggest similarities between the experience of Latino children and that of black children. For example, both black and Latino children experience high levels of residential and school segregation (Acevedo-Garcia et al. 2007; Acevedo-Garcia, Osypuk, and McArdle 2009; Acevedo-Garcia et al. 2008). Contextual factors—including disadvantaged family, housing, neighborhood, and school conditions—may help
explain the erosion of the initial health advantage (low rates of low birth weight) among Latino children. We therefore enter the next decade as a society in which blacks and Latinos are a substantial proportion of the child population, patterns of black-white inequality persist, and patterns of Latino-white inequality parallel those of black-white inequality.

Disparities in child health and development reflect a pattern of large racial and ethnic inequalities in the developmental contexts of children—that is, the environments in which children grow and develop. These environments include the family but also larger social contexts such as neighborhoods and schools as well as childcare, preschool, and after-school settings. The inequalities in neighborhood and school environment arise largely from a racially and ethnically unequal geography of opportunity (Acevedo-Garcia et al. 2007; Acevedo-Garcia, Osypuk, and McArdle 2009; Acevedo-Garcia et al. 2008). The central premise of a “geography of opportunity” framework is that residents of a metropolitan area are situated within a context of neighborhood-based opportunities that shape their quality of life, including their health and development (Acevedo-Garcia et al. 2008; de Souza Briggs 2005; Iannotta, Ross, and National Research Council 2002; powell 2005). The location of housing is a powerful impediment to or vehicle for accessing these opportunities. High levels of neighborhood (that is, residential) and school segregation are associated with large disparities in children’s exposure to high levels of neighborhood and school poverty, which is one indicator of low opportunity.

Although the literature has developed several compelling theories for explaining child development, these models fall short of explaining racial and ethnic developmental disparities because they are not situated within a larger structural framework. For example, ecological models of child development address the conditions and processes that govern human development within the actual environments in which human beings live (Bronfenbrenner 1979). Such ecological models emphasize the importance of multiple contexts (for example, family, neighborhood, childcare, school) in which children grow and develop (Shonkoff and Phillips 2000). Complementarily, the child-resilience literature has focused on the ability of children and families to withstand highly disadvantaged environments. More recently, the research on children’s biological sensitivity has addressed the interaction between children’s responses to stress (their stress reactivity) and low- and high-adversity developmental contexts (Obradovic et al. 2010). Yet what is missing from these approaches is the explicit recognition that the distribution of developmental contexts differs sharply by race and ethnicity; this omission arises partly from the focus of these approaches on
the development of individual children instead of on population patterns of child development. The extensive sociological and demographic research on segregation and the geography of opportunity does not address how unequal contexts affect developmental processes. Nor does it offer a definition of “opportunity” specific to child development.

To understand the developmental trajectories of U.S. children and how those trajectories vary by race and ethnicity, we need an integrative approach that combines insights from the literature on child development with the sociological and demographic literature on segregation and the geography of opportunity. The demographic trends discussed earlier suggest that the development and future of minority children will have large effects on the country in general and on certain regions in particular. Research about and policies to promote child development should recognize the centrality of the developmental trajectories of racial and ethnic minority children and should therefore examine the implications of a racially and ethnically unequal geography of opportunity.

**A DEFINITION OF CHILD HEALTH**

According to the Institute of Medicine’s report *Children’s Health: The Nation’s Wealth*: “Children’s health is the extent to which individual children or groups of children are able or enabled to (a) develop and realize their potential, (b) satisfy their needs, and (c) develop the capacities that allow them to interact successfully with their biological, physical, and social environments” (IOM 2004: 302). Although by a narrow definition of health—that is, the absence of physical or mental disease—the majority of U.S. children are healthy, the rate of chronic health conditions (obesity, asthma, other physical conditions, and behavior or learning problems) among children has increased from 12.8 percent in 1994 to 26.6 percent in 2006 (Van Cleave, Gortmaker, and Perrin 2010).

A growing body of evidence suggests that foundations of adult health, productivity, and socioeconomic attainment are established in childhood (Case and Paxson 2006; Palloni 2006). Therefore, broad definitions of child health, such as the one from the Institute of Medicine, emphasize the ability of children to develop their potential. This definition of child health refers both to individual children and “groups of children”; it addresses both the individual and population levels. The population-health aspect provides a link between child-development research and social-science research on inequality. The ability of some groups of children, including black and Latino children, to develop their potential is constrained by a
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racially and ethnically unequal distribution of supportive developmental contexts, or constrained by a limited geography of opportunity.

We define the geography of child opportunity as the context of neighborhood-based opportunities that influence children’s health and development, including whether they fully realize their potential. These opportunities include services that support child development (such as good-quality schools), healthy and safe physical environments (safe playgrounds), and healthy and safe social environments (safe, positive peer influences). A geography of opportunity framework is place-based (that is, neighborhood-based), but it also has a focus on equity (the relative position of neighborhoods in a metropolitan area). The neighborhood-based opportunities available to a child in his or her neighborhood matter in an absolute sense (for example, whether a high-quality school is available in that neighborhood). They also matter in a relative sense (whether the child lives in a neighborhood that has good opportunities for child development compared with other neighborhoods). The relative position of a neighborhood may be indicative of structural constraints in the metropolitan area (for example, limited availability of affordable housing in areas with high-quality public schools).

It is also a marker of its reputation in the metropolitan area (that is, how the neighborhood is perceived by residents, planners, and investors), which may influence, for instance, the willingness of families to move into certain neighborhoods. Children may have access to opportunities beyond their neighborhood, but such access depends on family resources as well as on policies that create links between neighborhoods in the region. For example, a child residing in a neighborhood with a low-quality public school may be able to attend a private school or to participate in a school integration program that allows him or her to go to a high-quality public school in another neighborhood. However, in the absence of family resources or regional policies, the neighborhood where a child lives is critical in determining his or her access to opportunity for healthy development.

The third element in this definition of child health articulated by the IOM is the ability of children to adapt successfully to their environments, including the neighborhood opportunity structure. But the IOM definition does not integrate information about racial and ethnic inequality in the environments in which children grow and develop. However, an unequal geography of opportunity leads some groups of children to face greater challenges adapting to their environments, because those environments have fewer resources to promote healthy child development. For such children positive health and developmental outcomes are less likely. In other
words, at the population level, racial and ethnic minority children face a greater challenge in adapting successfully to their environment than non-Hispanic white children.

SEPARATE AND UNEQUAL DISTRIBUTIONS OF SUPPORTIVE DEVELOPMENTAL CONTEXTS

Black and Latino children experience high levels of residential and school segregation, accompanied by higher exposure to poverty in neighborhoods and schools (Acevedo-Garcia, Osypuk, and McArdle 2009; Acevedo-Garcia et al. 2008; Sampson, Sharkey, and Raudenbush 2008). Although a large body of social-science research has documented pervasive patterns of contextual inequality (Logan 2002a and 2002b; Logan et al. 2001; Massey 2001, 2004, and 2008; Massey, Condran, and Denton 1987; Massey and Fischer 2000), this evidence is not often presented in a way that captures what we believe is a central issue for those interested in child development: the extent to which access to supportive developmental contexts is unequal. To address this gap, we have quantified the magnitude of racial and ethnic inequality in the child distributions of neighborhood and school poverty. At the population level we have observed that not only are the average values of indicators of the quality of developmental contexts worse for black and Latino children than for white children, but the entire distribution or spectrum of neighborhood quality is worse for minority children than for white children. For example, not only is the average neighborhood poverty higher for minority children than for white children, but in many metropolitan areas even the neighborhoods with low poverty rates for minority children are poorer than the neighborhoods with relatively high poverty rates for white children.

Limited Overlap in Neighborhood Context

In addition to large disparities in indicators that capture average values such as the index of neighborhood exposure to poverty, there is limited overlap in the entire distribution of neighborhood poverty between minority children on the one hand and white children on the other hand (Osypuk et al. 2009). The neighborhood poverty rate is the proportion of the neighborhood population whose income is below the federal poverty line. By limited overlap we mean that in metropolitan areas, black and Latino children are concentrated at the worst end of the neighborhood-quality distribution (that is, they live in neighborhoods with the highest
poverty rates), while white children are concentrated at the best end of the neighborhood-quality distribution (in neighborhoods with the lowest poverty rates) (Acevedo-Garcia and Bates 2007; Acevedo-Garcia et al. 2008).

Here we examine the extent of overlap in the race- and ethnicity-specific distributions of neighborhood poverty. The interquartile range (IQR) is the distance between the twenty-fifth percentile and the seventy-fifth percentile of neighborhood poverty—the range of the middle 50 percent of the data. Because it uses the middle 50 percent, the IQR is not affected by outliers or extreme values. Using 2000 data—the most recent available at the neighborhood level—for the hundred largest metropolitan areas, we subtracted the minority first quartile from the white third quartile to determine the amount of IQR overlap between two metropolitan-area race-specific distributions of neighborhood poverty for children. Figures 12.3 and 12.4 show respectively the overlap between white and black children in neighborhood poverty, and the overlap between white and Latino children. The first and third quartiles of race- and ethnic-specific distributions of neighborhood poverty correspond to the bottom and top lines of each boxplot—gray boxplots for black and Latino children and clear boxplots for white children, respectively. The median of neighborhood poverty for each group is marked by a heavy line in the center of the box. It is immediately apparent that there is limited overlap between the boxplots for black and Latino children on the one hand and white children on the other.

In the hundred metropolitan areas with the largest child populations in 2000, 76 percent of black and 69 percent of Latino children lived in poorer neighborhoods than the neighborhoods of the worst-off non-Latino white children. We defined the neighborhoods of the worst-off white children as those occupied by the 25 percent of white children living in the poorest neighborhoods for white children within those metro areas. This racial and ethnic disparity in neighborhood poverty is not accounted for by racial and ethnic differences in the distribution of family poverty—where a poor family is defined as one whose income is below the federal poverty line. When the analysis is limited to children living in poor families, 74 percent of poor black children and 60 percent of poor Latino children live in poorer neighborhoods than those of the worst-off poor white children (Acevedo-Garcia et al. 2008).

**Double Jeopardy: Challenging Developmental Contexts at Multiple Levels**

In addition to looking at separateness and inequality in the distribution of developmental contexts, we have examined disparities with regard to the
Figure 12.3. White and black children overlap for neighborhood poverty, 2000. Source: Calculations by http://DiversityData.org from 2000 Decennial Census, Summary Files 2 and 3.
Figure 12.4. White and Hispanic children overlap for neighborhood poverty, 2000. Source: Calculations by http://DiversityData.org from 2000 Decennial Census, Summary Files 2 and 3.
extent to which children experience challenging developmental contexts at multiple levels simultaneously. There is a misconception that minority children are more likely to live in poor neighborhoods than white children because their families are more likely to be poor, and poor families are more likely to reside in poor neighborhoods. Significantly, inequalities in neighborhood environment are not fully explained by family income. Poor white children are much less likely to experience disadvantaged neighborhoods than poor black and Latino children. In one analysis we looked at the proportion of children who live in a poor family and also in a poor neighborhood, defined as a neighborhood in which at least 20 percent of the population lives in poverty. We called this “double jeopardy.”

Figure 12.5 shows the proportion of white, black, and Latino children who experience double jeopardy in the hundred largest metropolitan areas. The magnitude of the disparity is striking. Only 1 percent of poor white children live in poor neighborhoods. In contrast, about 17 percent of poor black children and about 21 percent of poor Latino children live in poor neighborhoods. Figures 12.6 and 12.7 show that the extent of the racial and ethnic disparity in the experience of double jeopardy is significantly shaped by the level of residential segregation (low, medium, and high) between
Figure 12.6. Percentage of black and white children experiencing double jeopardy, by metro segregation. Note: “Double jeopardy” refers to the share of children living in poor families and in neighborhoods with poverty rates over 20 percent. Metros drawn from the one hundred largest according to child population. Excludes those metros with less than five thousand of the specified minority child population. Segregation was measured using the Isolation Index for black children. Medium segregation metros were defined as the median segregation value, and the two metros above and the two below the median segregation value. Source: Tabulations by http://DiversityData.org of 2000 U.S. Census.

Figure 12.7. Percentage of Latino and white children experiencing double jeopardy, by metro segregation. Note: “Double jeopardy” refers to the share of children living in poor families and in neighborhoods with poverty rates over 20 percent. Metros drawn from the one hundred largest according to child population. Excludes those metros with less than five thousand of the specified minority child population. Segregation was measured using the Isolation Index for Latino children. Medium segregation metros were defined as the median segregation value, and the two metros above and the two below the median segregation value. Source: Tabulations by http://DiversityData.org of 2000 U.S. Census.
minority and white children; in other words, the disparity is larger in areas with the highest level of residential segregation between minority children and white children. We return to the concept of double jeopardy later in the discussion of the literature on child resilience.

**Triple Jeopardy: Racial and Ethnic Disparities in School Context**

In the United States attendance at most public elementary schools is neighborhood-based, and the level of neighborhood (that is, residential) segregation is high (Iceland et al. 2002). Therefore, vast racial and ethnic disparities in neighborhood poverty go hand-in-hand with vast racial and ethnic disparities in school poverty, underscoring a strong structural link between neighborhood and school context (Logan 2002a). This means that not only are black and Latino children more likely than white children to experience double jeopardy, but they are also more likely to experience “triple jeopardy”: to face challenging developmental contexts in their families, their neighborhoods, and their schools—all at the same time. These challenges at multiple levels may compromise the resilience of black and Latino children.

Figures 12.8 and 12.9 show the unequal school context experienced by U.S. elementary-school children across the largest metropolitan areas in 2007 and 2008. These include those eighty-eight metro areas of the largest hundred in which at least 90 percent of students attend schools reporting valid data on free or reduced lunch eligibility. While 45 percent of white children attend schools in which less than 20 percent of the student population is poor, only 7 percent of black students and 8 percent of Latino students attend schools with such low levels of poverty. In contrast, 39 percent of black and 40 percent of Latino students attend schools where more than 80 percent of the student population is poor, while only 4 percent of white students attend such highly disadvantaged schools. In many metropolitan areas the disparities are even greater than the national figures (McArdle and Acevedo-Garcia 2010).

**Racial and Ethnic Disparities in Access to Other Developmental Settings**

In addition to documenting disparities in neighborhoods and schools, research has revealed significant disparities in access to other supportive developmental contexts, such as high-quality preschool programs. Black children are more likely than white children to participate in preschool
Figure 12.8. Percentage of black and white students attending schools by free and reduced lunch eligibility, 2007–08. Note: Includes those eighty-eight of the one hundred largest metro areas that report valid free and reduced lunch data for at least 90 percent of students. Low-income students defined as those eligible for free or reduced lunch. Source: Calculations by http://DiversityData.org of the National Center for Education Statistics, Common Core of Data, 2007–08.

Figure 12.9. Percentage of Hispanic and white students attending schools by free and reduced lunch eligibility, 2007–08. Note: Includes those eighty-eight of the one hundred largest metro areas that report valid free and reduced lunch data for at least 90 percent of students. Low-income students defined as those eligible for free or reduced lunch. Source: Calculations by http://DiversityData.org of the National Center for Education Statistics, Common Core of Data, 2007–08.
education, while Latino children are less likely: 23 percent of Latino three-year-olds were enrolled in preschool in 2000, compared with 49 percent and 43 percent of their black and white peers, respectively. However, the preschool programs to which black and Latino children have access are of lower quality than those available to white children (Magnuson and Waldfogel 2005). We do not know the extent to which disparities in preschool education arise from high levels of residential segregation and an unequal geography of opportunity, as data are not available on whether children enrolled in preschool attend programs in their neighborhood of residence. However, we do know that black and Latino children are more likely to attend public preschool programs such as Head Start; such programs may be more likely to be neighborhood-based than other programs.

ECOLOGICAL MODELS OF CHILD DEVELOPMENT: WHERE IS RACIAL AND ETHNIC INEQUALITY?

Although there is a vast and rich literature on contextual influences on child development, the majority of this work does not discuss the implications of population patterns of inequality in the supportive developmental contexts highlighted earlier in this chapter. In most instances even when racial and ethnic differences are addressed in the literature, the implications of limited overlap in developmental contexts, and the ways in which environments disadvantage minority children, are not.

In *The Ecology of Human Development*, researcher Urie Bronfenbrenner (1979) explained the importance of nested ecological levels for human development—for example, the individual, family, school, and neighborhood levels. As they develop, children are influenced not only by their immediate family but also by other more distant environments. For instance, the enactment of a federal early childhood education policy may influence a local early childhood education program, which in turn influences a child. Although the research on child development focuses largely on the context of the family unit, and while most empirical evidence relates to the influence of this context, Bronfenbrenner stressed that “whether parents can perform effectively in their child-rearing roles within the family depends on role demands, stresses, and supports emanating from other settings” (ibid.: 7). Bronfenbrenner notes that acknowledging that child development depends on both individual-level characteristics and environmental influences is not remarkable per se. However, actual theoretical developments and empirical research exploring the interplay between the individual and the environment are scarce.
Bronfenbrenner’s work provides a lens for examining contextual influences on developmental processes. He defined the *exosystem* as contexts in which the child is not directly involved but that can nevertheless influence the child’s development, such as policies that affect parental working conditions, which in turn influence the amount and quality of parent-child interaction (ibid.). He examined the ways in which power, particularly functioning within social networks, affects the exosystem, which in turn influences children. Bronfenbrenner hypothesized that the developmental potential of the family setting is enhanced by supportive links with external settings, specifically those that can offer access to resources. These two concepts (exosystem and supportive links) are important for understanding the implications of double—and triple—jeopardy, which may result in more limited supportive links between minority families and other settings and thus diminish the developmental potential of minority families.

Although most ecological models of child development do not discuss explicitly that there is a racially and ethnically unequal distribution of the supportive contexts that allow children to achieve positive developmental outcomes, there are important exceptions, a sample of which we discuss here (García Coll et al. 1996; Chase-Lansdale and Gordon 1996; Sampson, Sharkey, and Raudenbush 2008). In 1996 researcher Cynthia García Coll (García Coll et al. 1996: 1,893) stated that “there is no theoretical or empirical reason to assume that individual primary development processes operate differently for children of color than for Caucasian children in Western society. . . . However, developmental differentiation, beyond that related to constitutionally based individual differences, is largely a function of the dynamic interaction between the child and both proximal and distal ecologies.” She articulated the need to include social stratification into ecological models because “most of the prevalent conceptual frameworks [of child development] do not emphasize the social stratification system, or the social positions that comprise the scaffolding or structure of the system (i.e., social class, ethnicity, and race) and the processes and consequences that these relative positions engender for a child’s development” (ibid.: 1,892).

It is surprising that today, more than a decade later, García Coll’s assessment of the child development literature still holds true; this speaks to the ongoing need for conceptual integration. García Coll also suggested that some measures of child cognitive and social development may be biased, as they ignore that racial and ethnic minority children may successfully adapt to their more challenging environments by displaying behaviors that are not typically considered “adaptive.” In a similar vein the researcher
Michael Ungar (Ungar et al. 2008) noted that young people who are racially marginalized may have their own distinct ways to gain access to the resources needed to ensure their psychosocial development. Another example is researcher Edward Morris’s ethnography of black girls’ experiences in schools (Morris 2007). This account described how black girls were expected to conform to behavior that ignored their racialized position in society. For example, black girls’ “loud” or “assertive” behavior, for which they are often criticized by their teachers, may be a result of learning to defend themselves against negative stereotypes about black women.

One implication of these studies is that processes of child development may vary by race and ethnicity, because developmental contexts are unequally distributed by race and ethnicity. For example, whether child behaviors are adaptive or not may depend on the quality of developmental contexts. In his account of growing up as a white Irish Catholic boy in the Southie neighborhood of Boston, Michael Patrick MacDonald (1999) relates a story of contextual adversity that we have come to associate with young men of color—another example of racialized assumptions about developmental contexts. The book illustrates a couple of important points. First, young white men exposed to adverse contexts (including violence and poverty) also tend to have poor developmental outcomes; being the victim of street violence is one extreme example. Second, as a society, we regard young white men growing up in such developmental contexts as an exception, while growing up in such environments is considered the norm for young men of color.

The extent of inequality in developmental contexts is so great that it presents methodological challenges for understanding the effect of contextual influences on children of different racial or ethnic groups (Acevedo-Garcia and Osypuk 2008). In his study of children in Chicago, researcher Robert J. Sampson argued that distributions of neighborhood poverty are so unequal by race that it would not be methodologically sound to compare the effect of neighborhood environment on developmental outcomes among black and white children (Sampson, Sharkey, and Raudenbush 2008). Sampson and his colleagues examined several definitions of concentrated disadvantage, varying the level of neighborhood exposure to poverty for an initial sample of 2,226 children. When they defined concentrated disadvantage based on the bottom quartile of neighborhood poverty based on the national distribution of neighborhoods, some white and Latino children were indeed exposed but almost all black children were exposed (97 percent). When the definition of concentrated disadvantage was made more stringent (that is, living in a neighborhood with a poverty rate of 30...
percent or higher), only 5 percent of whites were exposed to concentrated disadvantage. It was only by using a lower threshold for poverty that these authors might have included whites and even most Latinos in their sample, but at that point nearly all blacks would have been at risk of exposure to concentrated disadvantage. The researchers therefore focused solely on black children “to gain the advantage of eliminating the differences between racial groups in the process of selection into disadvantaged neighborhoods while still being able to study the full distribution of neighborhood environments that blacks experience” (ibid.: 849).

The large racial and ethnic inequality in child developmental context has at least two research implications. First, to overcome the problem of limited overlap in developmental contexts, we may need to stratify analyses by race and ethnicity to estimate contextual effects (ibid.). Second, we may need to develop measures of child development that reflect adaptive processes in the racialized contexts that children face (García Coll et al. 1996). Bronfenbrenner (1979) has emphasized the transactional, or interactive, nature of development, noting that social contexts are not only a static setting for development. There are bidirectional influences between the child and his or her environments, and those environments can influence each other. For example, not only is a child affected by the quality of care he or she receives, but also a child may impact the behavior of his or her caregivers. Bronfenbrenner also noted that the majority of research describes contexts only in broad strokes but does not specify the processes through which children adapt to such contexts.

Research may contrast cognitive outcomes between children in black and white families, but the developmental context and processes are not specified. Although these two approaches would improve our understanding of child development, they are not sufficient because the population-level effect of the unequal distributions of developmental contexts is not estimated. For example, studies often sample children from a limited range of the distribution of a particular developmental context (such as high-risk neighborhoods), resulting in an incomplete picture of racial and ethnic inequality and its consequences (Acevedo-Garcia and Osypuk 2008). Before we turn to the implications of an unequal geography of opportunity, we examine what is known about contextual influences on child development.

**CONTEXTUAL INFLUENCES ON CHILD DEVELOPMENT**

This section highlights examples of well-established contextual influences on child development—for comprehensive reviews of the literature, see
the work of Jeanne Brooks-Gunn (Brooks-Gunn et al. 1993) and Tama Leventhal (2000). After reviewing the findings, we discuss the extent to which this important body of research addresses the effect of racial and ethnic inequality in developmental contexts. The majority of empirical research in this area focuses on the family as the main developmental context of children (Cooper et al. 2005; Bernat and Resnick 2006; Henrich, Brookmeyer, and Shahar 2005; Bradley and Corwyn 2002; Klebanov et al. 1998; Whiteside-Mansell et al. 2009; Eamon 2002). The family environment is often defined as family socioeconomic status (for example, poverty) and household interpersonal relations (such as conflict between the parents).

There is increasing research on the development of the brain in early childhood and on the negative effects of stressors on brain development (Hackman and Farah 2009). In this work the child’s context is understood as his or her family environment, mediated by the parent or the caregiver. Researcher Leanne Whiteside-Mansell (Whiteside-Mansell et al. 2009) has described the degree to which maternal warmth (including physical responsiveness like hugging as well as emotional responsiveness like talking to the child) and harsh discipline practices (including excessive use of spanking, yelling, scolding) toward the child might explain the link between interpartner conflict (conflictual relations between the parents) and young children’s social development in a large nonclinical sample of racially diverse preschoolers. This study showed that harsh discipline acts as a mediator between interpartner conflict and child-behavior problems (externalizing and internalizing behavior) on the one hand and deficits in social skills on the other.

There is less empirical evidence on more distal contexts of child development, such as schools (Bernat and Resnick 2006; Henrich, Brookmeyer, and Shahar 2005; Bradley and Corwyn 2002) and neighborhoods (McLoyd 1998; Attar, Guerra, and Tolan 1994; Bradley and Corwyn 2002; Caughy and O’Campo 2006; Klebanov et al. 1998; Brooks-Gunn et al. 1993). However, a large body of work has documented the effects of neighborhood and school context above and beyond the effect of family factors.

**Neighborhood Effects**

In their review of neighborhood and child and adolescent outcomes, the researchers Tama Leventhal and Jeanne Brooks-Gunn (2000) have suggested links between neighborhood socioeconomic status and residential stability with academic achievement, behavior problems, juvenile delin-
frequency, and to a lesser extent teenage sexuality and childbearing. The researcher Robert J. Sampson (Sampson, Sharkey, and Raudenbush 2008) found that, on average, living in a severely disadvantaged neighborhood reduced the verbal ability of black children (measured by the Wechsler Intelligence Scale for Children vocabulary test and the Wide Range Achievement Test reading examination) by about four points, a magnitude that is similar to the effect of missing a year or more of schooling. Children were followed for up to seven years after the initial assessment. Similarly, researcher Dafna E. Kohen (2002) has found that children’s verbal ability scores (the Peabody Picture Vocabulary Test–Revised) were negatively associated with residing in neighborhoods with poor residents and with low social cohesion. The researcher Margaret O’Brien Caughy (Caughy and O’Campo 2006: 148) has found that both social capital and neighborhood poverty were related (positively and negatively, respectively) to preschoolers’ cognitive development (using the Kaufman-Assessment Battery for Children Simultaneous Processing score).

Coauthors Margaret Caughy, Saundra Nettles, and Patricia O’Campo (2008) have showed that both neighborhood socioeconomic impoverishment and negative social climate (for example, physical and social disorder in the neighborhood) contribute to child-behavior problems. The researchers concluded that there is increasing evidence that “child behavior problems are not only a function of processes at the individual and family level but are also influenced by characteristics of the neighborhoods in which children live” (ibid.: 47).³ Some neighborhood studies have shown an effect of neighborhood poverty over and above the influence of positive parental involvement—that is, parenting (as an intervening variable) does not mediate or explain the relationship between neighborhood poverty and child behavior problems. Caughy (Caughy and O’Campo 2006) has showed that parental eliciting behavior (defined by willingness to answer questions, being sensitive to the child’s feelings, and talking to the child about his or her interests), parental engagement in joint activities, and engaging in routine daily activities with the child all differed significantly by neighborhood. When they explored neighborhood impoverishment and parent-child joint activities, researchers found that both factors importantly contributed to differences in the problem-solving skills of African American children between three and four-and-a-half years-old: a lower level of neighborhood impoverishment and more parental engagement in joint activities were both related to better problem-solving skills.

The body of research on neighborhood effects, discussed earlier in relation to child development, continues to grow. However, most of the empiri-
cal evidence in this area comes from nonexperimental, cross-sectional studies, and thus causality between neighborhood influences and developmental outcomes cannot be adequately established (Acevedo-Garcia et al. 2008). These methodological limitations are also true of most of the research on school effects that we address in the next section. One experimental study, Moving to Opportunity, has shown positive effects of moving from high- to low-poverty neighborhoods on both women’s and girls’ mental health (U.S. Department of Housing and Urban Development et al. 2003; Acevedo-Garcia et al. 2004; Leventhal and Brooks-Gunn 2003). A significant puzzle emerged from the Moving to Opportunity research: although girls benefited from moving to lower-poverty neighborhoods, boys did not. Qualitative research conducted by the Urban Institute suggests that girls are particularly vulnerable in high-poverty neighborhoods, due largely to pressures for early sexual initiation and other forms of gender-based harassment and violence (Popkin, Leventhal, and Weismann 2010).

Although the neighborhood-effects literature addresses contextual influences, it often ignores the implications of large racial and ethnic disparities in the populationwide distributions of developmental contexts. Individual neighborhoods are nested within and influenced by the larger economic and social context (including residential segregation and an unequal geography of opportunity) of a larger metropolitan area. This metropolitan context has been well documented in demography and urban studies, but the child development literature remains focused on the effects of individual neighborhoods. There are several implications of decontextualizing neighborhoods from their metropolitan areas. Of particular concern are sampling frames of extant neighborhood studies. In instances in which the sample is exclusively from the central cities (for example, the Project on Human Development in Chicago Neighborhoods), the study may underestimate racial and ethnic health disparities. For example, analyzing neighborhood effects only in a large city excludes suburban neighborhoods, where whites and higher socioeconomic status residents live in disproportionate numbers and may therefore underrepresent racial and ethnic disparity, since the most advantaged part of the neighborhood distribution is not included in the analysis (Acevedo-Garcia and Osypuk 2008).

A main research question in the neighborhood effects literature is whether neighborhood context exerts an independent influence on child development—that is, an effect above and beyond family influences. However, wide racial and ethnic differences in neighborhood environments may have significant effects on disparities in child development, and this
is regardless of whether the effect of neighborhood context is independent of family factors (that is, above and beyond family factors) or mediated by family factors.

**School Effects**

Unlike the literature on neighborhood effects, the literature on academic achievement is explicit about the racial gap, as well as about racial and ethnic inequality in school contexts and its effects on the developmental trajectories of children of different racial and ethnic backgrounds. In a review of the issue, researcher George Farkas (2002) observed that racial and ethnic minority students typically attend racially isolated, low-performing elementary schools, which also sets them up to enroll in lower-track courses within lower-performing middle and high schools with less challenging academic climates. In other words students who fall behind early tend to fall farther behind as they reach higher grade levels. Racial and ethnic minority students have fewer opportunities to learn—whether in the classroom, via student-teacher interactions, over the summer through parent-student or student-peer interactions, or via teachers’ expectations, which drive student effort and behavior.

Farkas (ibid.: 20) reported that “other things being equal, both white and black students in high minority schools show lower academic performance than those in schools with lower concentrations of black students.” Consequently, lesser school-readiness development in the preschool period, combined with racially and economically isolated elementary schools, leads to lesser skill development during the elementary school period. This in turn leads to lower-level placement in lower-performing middle and high schools and to a flatter achievement trajectory from kindergarten through twelfth grade. Farkas points to a number of factors that contribute to this trajectory: inferior school resources, including lower teacher skills (where teachers with higher skills are drawn to more organized and higher-performing work environments), lower teacher expectations of students, higher student and teacher turnover, placement into lower ability groups and special education, grade retention, summer fallback (losing over the summer what was gained during the school year, often because of few enrichment activities), placement into lower-track courses in middle and high school, and weaker academic climates in schools.

Previous analyses of the well-known Equality of Educational Opportunity study suggested that a student’s family background is more important than school social composition and school resources for understanding
student outcomes. However, researchers Geoffrey Borman and Maritza Dowling’s (2010) recent reanalysis, which uses a different statistical technique to separate the effects of school environment and family background, arrives at a different conclusion. These authors found that attending a high-poverty school or a highly segregated black school had a significant negative effect on student achievement outcomes, above and beyond the effect of individual poverty or minority status. Specifically, both the racial and ethnic and socioeconomic composition of a school were 1.75 times more important than a student’s individual race and ethnicity or social class for understanding educational outcomes.

An ecological framework would suggest that developmental risks increase with exposure to multiple contexts that provide limited resources to support child development. As Gary Evans (2004: 1) has stated: “The accumulation of multiple environmental risks rather than singular risk exposure may be an especially pathogenic aspect of childhood poverty.” Some studies offer insights into the effects of double jeopardy. For example, in a review of the relationship between socioeconomic status and child development, coauthors Robert Bradley and Robert Corwyn (2002) have summarized the literature on teachers’ negative attitudes and low expectations regarding low socioeconomic status, students’ abilities, academic achievement, and behavior. They showed that those attitudes and expectations often become self-fulfilling prophecies, because children from low socioeconomic status families have less exposure to cognitively stimulating materials and experiences at home coupled with low teacher expectations and interactions, resulting in low performance and disruptive behavior.

From scholarly work on the academic achievement gap, we can derive two important lessons for research on racial and ethnic inequality in other developmental contexts: (1) greater specificity about school context and processes, beyond broad-stroke depictions of school poverty, and (2) an emphasis on developmental trajectories beyond looking at outcomes at one point in time.

## Resilience: Child Development in High-Risk Contexts

The study of positive development does not inherently account for development under stress. In contrast, the related concept of child resilience is reserved for populations in which successful development is beyond what would be expected given the challenges of social interaction (Ungar and Lerner 2008). The research on resilience may therefore be relevant
to the experiences of minority children. However, as a result of its focus on children in high-risk contexts, the resilience literature does not fully consider the range of developmental experiences for minority children and especially for white children. The researcher Ann S. Masten (1990) has defined resilience in childhood as “the process of, capacity for, or outcome of successful adaptation despite challenging or threatening circumstances.” Each individual possesses the potential for resilience, but it is the delicate interplay of individual characteristics and the broader environment that determines one’s level of resilience (Tusaie and Dyer 2004). Resilience is not measured directly but by comparing two constructs: risk and positive adaptation (Luthar and Zelazo 2003; Luthar and Zigler 1991). The researcher Suniya Luthar has noted that positive adaptation is more likely to occur when protective factors are present. Protective factors can be present at the level of the child (for example, the IQ), the parent (maternal depression, educational attainment), the family (family cohesion), the neighborhood (poverty), and the school (school attachment). A child’s development and health are more likely to be compromised if he or she experiences challenges at multiple levels (Resnick et al. 1997). For example, a child living in a family with limited resources to support his or her development may have a more difficult experience if his or her other developmental contexts, such as the neighborhood and school, also offer limited resources.

Let us refer back to the third element of the definition of child health by the Institute of Medicine and to the disparities in family, neighborhood, and school environment discussed earlier. From the definition and the racial and ethnic disparities in developmental contexts, it follows that unless the underlying distributions of positive adaptation (or protective factors) varied by race and ethnicity and significantly favored minority children—which we have no reason to assume—minority children would have lower chances of successfully adapting to their environments, because those environments are riskier than those of white children.

A few studies have shown that resilient children living in challenging neighborhoods underscored the positive aspects of their neighborhoods and were able to navigate the neighborhood stressors, unlike nonresilient children (Eiseman, Cove, and Popkin 2005). Although aware of neighborhood dangers, resilient children appeared to manage those dangers by taking precautions, such as going indoors at night or avoiding certain areas. However, some nonresilient children seemed overwhelmed by neighborhood pressures and chose to remain inside and to stay away from their neighbors (ibid.). Although the resilience literature is helpful in understanding which factors allow some children to navigate risky neighborhood envi-
environments, it is also essential to recognize which children are more likely to live in those environments. For instance, the 2005 National Survey of Children’s Health showed that although about 92 percent of white parents reported living in neighborhoods where they usually or always felt safe, only about 69 percent of black and Latino parents did. Furthermore, some evidence suggests that racial and ethnic disparities in perceptions of neighborhood environment underestimate disparities in objective neighborhood conditions, including poverty levels (Osypuk and Acevedo-Garcia 2009).

The literature on resilience discusses a range of protective factors, some of which seem amenable to policy interventions. The researcher Michael D. Resnick (Resnick et al. 1997) has explored the role of risk and protective factors for four domains of adolescent health (grades 7 through 12). In that study, perceived school connectedness (for example, students’ perceptions that teachers treat students fairly, that they are close to people at school, and that they feel part of their school) was protective against emotional distress, suicidal thoughts and behaviors, violence, use of three substances (cigarettes, alcohol, and marijuana), and young age of first sexual experience. Luthar (2003) has recounted Edward Zigler’s (Zigler, Finn-Stevenson, and Stern 1997) work examining school factors that may promote resilience, measured by better adaptation on eight dimensions of social competence by age fifteen. These protective factors included prior participation in a preschool program, prevention of mental health problems among elementary school children who show early signs of maladjustment, and reorganization of adult school-time responsibilities to provide additional support to children who need it.

In sum, because of its focus on high-risk environments, and given the unequal distributions of developmental contexts, the resilience literature speaks disproportionately to the experience of racial and ethnic minority children. However, this racialized and unequal context is often not discussed. The resilience literature considers “community” as context as well as an agent of change (Chaskin 2008). The community-as-context perspective focuses on communities as local environments providing a set of both risk and protective factors that promote or inhibit, enhance or diminish resilience and well-being within communities (ibid.). The second perspective focuses on communities not just in terms of their influences on individuals and families, but as actors that respond to adversity (ibid.).

Both aspects of community are critical for understanding the developmental context of racial and ethnic minority children. We want to document whether minority children are differentially exposed to communities where contextual risks outweigh protective factors, and also under what
circumstances minority communities develop effective responses to adversity. For example, if “school connectedness” is a protective factor, is it a resource that is equally available to minority and white children across school contexts? If it is not—for example, if it is less available to minority children in segregated, high-poverty schools—then what are the population-level effects of differential exposure to high-risk contexts coupled with differential availability of protective factors? Or, how do minority communities respond to contextual adversity to protect children, and how does this affect their ability to “mitigate, resist, or undo” structural inequality, to paraphrase the researcher Arline Geronimus (2000)?

**A CHILD DEVELOPMENT–SPECIFIC DEFINITION OF THE GEOGRAPHY OF OPPORTUNITY**

There has been limited intersection—and cross-fertilization—of the child development and racial and ethnic stratification literature. As a result, we have limited information on the implications of unequal distributions of supportive developmental contexts. In Bronfenbrenner’s terms (1979), we have comprehensive broad-stroke information on racial and ethnic differences in developmental contexts (e.g., neighborhood poverty and school poverty), but more limited information on racial and ethnic differences in specific resources that foster child development (such as high-quality after-school programs)—and even less information on the processes through which children adapt to such contexts.

Most of the literature on neighborhood effects has used neighborhood poverty as a proxy for neighborhood environment (Brooks-Gunn et al. 1993; Attar, Guerra, and Tolan 1994; McLoyd 1998; Klebanov et al. 1998; Bradley and Corwyn 2002; Caughy and O’Campo 2006). Although poverty is a good indicator of neighborhood environment and the neighborhood-opportunity structure (Galster and Killen 1995), it does not capture explicitly the availability of resources and stressors related to child development. Neighborhood poverty matters, but so do other neighborhood conditions such as public safety, the level of trust among neighbors, availability of safe recreational spaces, and access to affordable, healthy food. These aspects of neighborhood environment have all been shown to influence child health and development (Acevedo-García et al. 2008). However, because of logistical and cost limitations, nuanced contextual descriptions are often limited to a few neighborhoods or to one or a couple of cities.

Moving away from a focus on neighborhood poverty, Sampson has argued that “to consider only neighborhood poverty as the causal treat-
ment of interest is too narrow, because poverty is strongly associated with other ecological characteristics, such as percentage of single-parent families, percentage of family members on welfare and unemployed, and racial segregation” (Sampson, Sharkey, and Raudenbush 2008: 846). Sampson therefore measured concentrated disadvantage by focusing on six neighborhood characteristics: welfare receipt, poverty, unemployment, female-headed households, racial composition (percentage black), and proportion of children (percentage of children under age eighteen). We depart from Sampson’s work regarding the use of a measure of disadvantage that conflates racial composition (that is, percentage black) with indicators of disadvantage or lack of opportunity. We prefer the approach developed by the Kirwan Institute for the Study of Race and Ethnicity at Ohio State University, which has created an opportunity index that does not include race. This racially neutral opportunity index can then be correlated with neighborhood racial composition to show which racial and ethnic groups have—and do not have—access to opportunity.

As discussed earlier, the central premise of a geography-of-opportunity framework is that residents of a metropolitan area are situated within a context of neighborhood-based opportunities that shape their quality of life (Acevedo-Garcia et al. 2008; de Souza Briggs 2005; Iannotta, Ross, and National Research Council 2002; powell 2005). We have defined “opportunity neighborhoods” as neighborhoods that support healthy child development (Acevedo-Garcia et al. 2008). Characterizing opportunity neighborhoods requires selecting variables that are indicative of high (or low) opportunity. Indicators could either be impediments to opportunity (negative neighborhood factors include high neighborhood poverty) or conduits to opportunity (positive factors include an abundance of jobs). The various opportunity indicators are analyzed relative to the other neighborhoods within the region by standardizing through the use of z-scores, which indicate how far and in what direction a particular value of the indicator deviates from its distribution’s mean, expressed in units of its distribution’s standard deviation. This allows data for a neighborhood to be measured based on its relative distance from the data average for the entire region.

The final “opportunity index” for each neighborhood is based on the average of all z-scores for all indicators by category (for example, education [see Kirp 2007], economic mobility and transportation, health and environment, and neighborhood quality). The corresponding level of opportunity (very low, low, moderate, high, very high) is determined by sorting all neighborhoods into quintiles (that is, five equal segments) based on their opportunity-index scores ordered from low to high values. Thus
the neighborhoods identified as “very high” opportunity represent the top 20 percent of scores. Conversely, neighborhoods identified as “very low” opportunity represent the bottom 20 percent of scores.

An approach similar to the Kirwan Institute’s can be applied to building an opportunity index specific to child development. This approach would allow depiction of the entire neighborhood distribution in a given region; this would include identification of neighborhoods across the spectrum of resources for healthy child development as well as racial and ethnic disparities in access to supportive developmental contexts. Alternatively, the index could also be constructed from data on a group of metropolitan areas to show differences in developmental contexts of children across regions. An index of place-based opportunity specific to child development should incorporate indicators of the availability and quality of institutional resources and services (such as early childhood education, schools, and after-school programs), social environment (youth victimization rates), social capital (levels of trust, action, and network interaction within a community), collective efficacy (levels of mutual trust, common willingness to intervene for the common good [indicating informal social control], and sense of connectedness [social cohesion] among a community), built environment (safe parks and playgrounds and open spaces), and mainstream commercial establishments (grocery stores and supermarkets, banks) (Sampson, Raudenbush, and Earls 1997; Gallagher 2006, 2007, and 2010; Cradock et al. 2005).

Although there is value in combining indicators into a single opportunity index, it would also be important to look at the different components separately to understand their effects on specific aspects of child health and development. For example, if we were examining neighborhood resources for families with children under age three, we would look at availability of early childhood programs, Head Start, and home visitation programs for at-risk parents. If we were interested in whether neighborhoods offer resources to prevent childhood obesity, we would look at another subset of indicators, including safety, availability of safe parks and playgrounds, and food deserts (that is, geographic areas that have no or sparsely located mainstream grocery stores and thus may have limited or no access to fresh and affordable foods).

Although there is value in collecting information on neighborhood processes (such as whether neighbors take responsibility for supervising children’s behavior as they play and interact outside the home), a child neighborhood-opportunity index should be constructed from indicators available from public-use data sources, covering a large number of areas.
Only this type of data and coverage would allow us to monitor disparities in opportunity within metropolitan areas across neighborhoods and also to compare disparities in opportunity across metropolitan areas. While case studies of certain metropolitan areas can add indicators available locally, a standard index would allow a better assessment of racial and ethnic equity in children’s access to opportunity neighborhoods and allow for comparison by neighborhood. The child-development literature can inform an opportunity index specific to the resources and risk that most matter to children. Such an index can be used both for monitoring racial and ethnic disparities in developmental contexts and for examining the effects of supportive (or challenging, for example, resource poor) contexts on child outcomes.

A GEOGRAPHY-OF-OPPORTUNITY FRAMEWORK FOR CHILD DEVELOPMENT

The data presented earlier suggest that at the population level, the risk-protective factor set discussed in the resilience literature is heavily weighted toward risks for black and Latino children. In the mid-1990s the researcher George Galster (Galster and Killen 1995; Galster and Mikelsons 1995) provided a framework for understanding the implications of distributional issues by applying the constructs of “neighborhood opportunity structure” and “geography of opportunity” to examining youth development outcomes. However, his conceptual work was published in the housing-studies literature and has not been widely used in studies of child development. As mentioned earlier, child development studies often focus on children in a small number of neighborhoods or neighborhoods in a particular section of a metropolitan area, such as the central city. These studies of neighborhood effects do not allow us to compare developmental outcomes across space—that is, across urban and suburban neighborhoods with vastly different opportunity structures.

One important result of an unequal geography of opportunity is the existence of racial and ethnic disparities in objective conditions within developmental contexts, such as high-poverty neighborhoods and schools. In addition to highlighting this result, Galster’s work connected the geography of opportunity concept with individual-level psychological processes such as decision making (Galster and Killen 1995; Galster and Mikelsons 1995). In the case of child development, the decision-making processes of both parents and children are important, as both parents and children may affect developmental outcomes, and segregation and an unequal geography
of opportunity affect decision making at different levels. First, even if parents are interested in choosing a supportive context for their children (for example, a safe neighborhood or a high-quality school), minority parents choose neighborhoods and schools from a far more limited set of options than white parents.

In the case of neighborhoods, constraints arise from the operation of housing markets. Coauthors David Harris and Nancy McArdle (2004) showed that in the Boston area, housing affordability alone did not explain the residential choices of black and Latino households. Other factors that contribute to explaining segregation patterns include housing discrimination, hostility, and preferences (for example, minority avoidance of white areas). Although the relative importance of these factors is not known, the indisputable fact is that Latino and black families face more limited options when choosing a neighborhood. In addition to constraining neighborhood and school choices across metropolitan areas, an unequal geography of opportunity also influences parental and youth decision making at the neighborhood level. Galster (Galster and Killen 1995) has proposed that through their peer networks, minority youth perceive a glass ceiling created by an unequal metropolitan opportunity structure. He writes that youth make decisions on the basis of perceived opportunities (Galster and Killen 1995: 8). These perceptions reflect objective structural constraints, such as housing discrimination. Facing a restricted choice set predisposes minority youth to adopt decision-making methods characterized by a short-term focus and less consideration of the long-term consequences. For instance, youths who face restricted educational and employment opportunities may decide to drop out of school or participate in activities that put them at risk (for example, gang activity).

Racial and Ethnic Inequality in Developmental-context Choice Sets

Galster’s (ibid.) framework constitutes a rare example of how to combine an inequality perspective on the neighborhood and metropolitan opportunity structure (a perspective informed by social stratification theory and empirical work) and child and youth development processes at the individual level. We reviewed the literature for integrative work similar to Galster’s and found only a few studies. Based on interviews with forty-eight urban, Midwestern parents during the nine months before, during, and after they selected a new school for their children entering the sixth or ninth grade, the scholar Courtney
Bell (2009) found that differences in the choice process did not explain why some parents chose failing schools. Instead, differences in choice sets explained, in part, why parents chose the schools they did. Parents of different social class backgrounds were not choosing from the same sets of schools. Middle-class parents’ choice sets contained, on average, a greater percentage of nonfailing (65 percent versus 38 percent), selective (71 percent versus 37 percent), and tuition-based schools (50 percent versus 14 percent) than did poor and working-class parents’ choice sets. In addition, just 16 percent of poor and working-class parents had at least two nonfailing schools in their choice sets, as compared with 58 percent of middle-class parents. These differences were statistically significant and consistent with the pattern of parents’ final school selections. Like Galster and Killen (1995), Bell (2009) found that social networks play an important role in decision making.

Middle-class parents’ social networks put them in contact with a higher proportion of nonfailing, selective, and tuition-based schools than did poor and working-class parents’ networks. The differential contact provided by social networks was not trivial given the large proportion of schools nominated by social connections. Class-based choice-set differences are likely to have implications for children. For example, many poor and working-class families may not even consider schools that would give their children an educational advantage. The status quo (or default) choices vary considerably by class. Across social classes, parents selected schools in the “customary enrollment patterns,” defined as the expected sequence of schools (elementary, middle, and high) a child attends. The customary enrollment pattern is often related to a system of feeder schools and provides a set of “ready-made next school(s)” for most parents.

Across social classes, parents selected schools in the customary school enrollment pattern at similar rates: 52 percent of middle-class parents and 56 percent of poor and working-class parents. Customary enrollment patterns, though, provided access to very different schools. Poor and working-class parents’ customary enrollment patterns provided little access to nonfailing, selective, and tuition-based schools. Of the schools within their customary enrollment patterns, only 44 percent were nonfailing, 23 percent were selective, and 10 percent were tuition-based, while middle-class customary enrollment patterns were made up of schools that were 57 percent nonfailing, 73 percent selective, and 50 percent tuition-based. Parents used similar processes—social networks and customary attendance patterns—to develop their choice sets. But these similar processes did not yield the same results. Middle-class parents’ social networks and
customary enrollment patterns provided greater contact with nonfailing, selective, and tuition-based schools than did poor and working-class parents’ networks and enrollment patterns.

Bell (2009) then considered the racial and ethnic and geographic dimensions of differences in school-choice sets. Not surprisingly, in her sample the majority of parents in city schools were from racial and ethnic minority backgrounds and their children attended schools that were predominantly minority. Most suburban parents were white and their children attended predominantly white schools. Therefore, although many parents expressed a preference for more racially and ethnically diverse schools, those schools simply did not exist in their school-choice sets. The data discussed earlier show vastly different distributions of school social environment (for example, school poverty by race and ethnicity), which provides another indication of the more constrained school-choice sets facing black and Latino children as compared with white children.

Figure 12.10 helps us quantify the extent of school-choice set overlap for children of different groups using the example of the Boston metropolitan area. We examine school characteristics for Boston Public Schools to illustrate that the choice sets of children in Boston proper (who are disproportionately of minority background compared with the rest of the metropolitan area) are more constrained than the choice sets of children in adjacent suburbs. The boxplots portray the 2008–09 school year distributions (maximum, seventy-fifth percentile, median, twenty-fifth percentile, and minimum) of four characteristics of public elementary schools that contain a fourth grade in the Boston Public Schools and in the neighboring communities of Newton (a primarily white suburb) and Cambridge (a racially diverse city that is part of the central-city portion of the Boston metropolitan area).

Characteristics include school’s combined black and Latino percentage of enrollment; percentage of enrollment that is eligible for free or reduced lunch; and fourth-grade Massachusetts Comprehensive Assessment System (MCAS) Composite Performance Indices (CPI), which measure the extent to which students are progressing toward proficiency in English language arts and mathematics. A CPI of 100 in a given content area means that all students have reached proficiency. For all characteristics the distributions of school districts (the choice sets) are markedly different, with Newton exhibiting much lower shares of black and Latino and low-income students and much higher MCAS scores than Boston schools, and Cambridge falling somewhere in between. For the two demographic characteristics and for the math MCAS, the interquartile range (the percentages or scores that
make up the middle 50 percent of the distribution) for each district does not overlap at all with the other districts. For the English MCAS, the interquartile range overlaps only between the Cambridge and Boston schools.

By severely limiting the choice sets of supportive developmental contexts for minority families, an unequal geography of opportunity creates racially and ethnically segmented pathways for child development. However, as the researcher Cynthia García Coll has stated, and as we discussed earlier, even highly contextualized models of child development have not adequately incorporated this inequality framework (García Coll et al. 1996).

Figure 12.10. Distribution of schools with fourth grades: Percentage of black or Hispanic, percentage low-income, and English and math MCAS Composite Performance Indices, 2008–09. Note: “Low-income” refers to free/reduced lunch eligibility. A Composite Performance Index (CPI) of one hundred means that all students have reached proficiency. Excludes charter and private schools. Source: Tabulations by http://DiversityData.org of data from Boston Public Schools and Massachusetts Department of Education.

POLICY IMPLICATIONS: IMPROVING NEIGHBORHOOD AND SCHOOL-CHOICE SETS FOR ALL CHILDREN

From the 2005 *Carmen Thompson v. HUD* decision: “Geographic considerations, economic limitations, population shifts, etc. have rendered it impossible to effect a meaningful degree of desegregation of public housing by redistributing the public housing population of Baltimore City within the City limits. . . . In sum, the Court finds that HUD failed to consider
regionally-oriented desegregation and integration policies, despite the fact that Baltimore City is contiguous to, and linked by public transportation and roads to, Baltimore and Anne Arundel Counties and in close proximity to the other counties in the Baltimore Region. The 2005 Court decision found the U.S. Department of Housing and Urban Development responsible for housing discrimination against minority families living in public housing in Baltimore (Powell 2005). Of special relevance to this chapter is the Court’s view that HUD failed to consider housing options for these families across the entire Baltimore region—another expression of racialized assumptions about where people should live. Similarly, other housing and education policy choices that affect the development of children are predicated on assumptions that the developmental contexts of minority children should be limited to some parts of the metropolitan area, instead of considering the full spectrum of neighborhood and school choices across the entire region.

The majority of children attend a school in their neighborhood or school district of residence, while programs that allow children to go to schools outside their residential area (for example, district or interdistrict school integration programs) include only a small proportion of children. For example, according to the National Center for Education Statistics, 73 percent of students in grades 1 through 12 in 2007 attended public schools to which parents report the student was assigned; 16 percent attended public schools where parents reported that the student’s school was chosen (such as magnet schools, charter schools and inter- and intradistrict choice programs); and 12 percent attended private schools (Grady and Bielick 2010).

An important push for improving the developmental contexts of children comes from the research and policy advocacy on early childhood education. The available evidence suggests that early childhood education and family-support programs for children at risk (that is, children who experience challenging developmental contexts such as family poverty) are successful as well as cost-effective (Shonkoff and Phillips 2000). Consequently, a strong policy recommendation from child development experts is the expansion of early childhood education programs (Kirp 2007). Another set of policy recommendations might reduce the exposure of young children to double and triple jeopardy (defined as exposure to challenging contexts at multiple levels, such as family poverty coupled with neighborhood and school poverty).

Several policy solutions exist for correcting the limited access to opportunity neighborhoods and schools facing black and Latino children. Some of these policy areas, such as housing, are not traditionally considered part
of policy that affects children. However, an ecological perspective suggests that broader social policies that affect children’s exosystems also influence child development (Bronfenbrenner 1979). Policies to correct or alleviate an unequal geography of opportunity have been characterized as people- and place-based policies (Katz 2004; de Souza Briggs 2005). The goal of people-based policies is to expand and improve neighborhood and school choices for people across entire regions or metropolitan areas. Place-based policies focus on improving the physical and social infrastructure of highly disadvantaged neighborhoods (through economic development and housing revitalization, for example) or intervening in highly disadvantaged (that is, underperforming) schools (Katz 2004).

In addition to explicitly addressing and quantifying resources for healthy child development, an opportunity framework is helpful because addressing racial and ethnic segregation per se is difficult in a policy environment in which race-based solutions are being challenged. For example, a 2007 Supreme Court decision ruled against school-integration programs that seek to improve access of minority children to quality schools by assigning individual students based on their race (United States Supreme Court 2007). Although limited in scope given the small number of children they affect, school-integration programs are one of very few policy tools based on the premise that residential segregation is at the root of disparities affecting children. In the future, policy remedies to correct racial and ethnic disparities will increasingly have to invoke principles other than racial integration. Even school-integration programs that rely on socio-economic status—and not on race—as an assignment criterion are at risk, as illustrated by a recent North Carolina court decision to dismantle an income-based busing policy (Brown 2010).

People-based neighborhood policies are dedicated to improving the ability of minority families to find housing (and possibly as a corollary, schools) in better-off suburban neighborhoods. People-based policies include those that improve the neighborhood choices of families across the entire metropolitan area. Those policies include increasing rental and affordable housing in the suburbs and strengthening enforcement of housing antidiscrimination laws. There is empirical evidence that housing policies influence access to better neighborhoods. Policies with demonstrated positive effects on neighborhood choices include housing vouchers for rental assistance (versus traditional public-housing projects) (Turner 1998); “housing mobility”—that is, housing-search counseling and support in rental assistance (versus providing only a housing subsidy or voucher) (Goering and Feins 2003); and inclusionary land-use regulations (versus
regulations that limit high-density or multifamily housing) (Pendall, Puentes, and Martin 2006).

Certain housing policies such as the Section 8 Housing Voucher Program have been shown to improve families’ ability to find housing in better neighborhoods. For example, on average, families on Section 8 are able to find housing in neighborhoods with lower poverty rates than families living in traditional place-based public housing developments (Turner 1998). However, black and Latino families are not as successful in finding housing in low-poverty neighborhoods as white families, presumably because of more limited information about housing choices and discrimination by landlords in suburban communities (ibid.). Therefore, policies to improve neighborhood choices for minority families should incorporate proactive assistance to find housing in better neighborhoods. Evidence from Moving to Opportunity (MTO) and other housing programs indicates that housing-search counseling improves neighborhood choices (Acevedo-Garcia et al. 2004; Tegeler, Cunningham, and Turner 2005). This piece is particularly relevant in helping families find neighborhoods that offer better opportunities for their children. As discussed earlier, an unequal geography of opportunity effectively limits the neighborhood choice set of minority families as well as the scope of their choice making generally (for example, choosing schools) (Galster and Killen 1995; Bell 2009).

For a better neighborhood (one with a low level of poverty) to offer improved opportunities to children, two things are necessary. First, in addition to a general indicator such as low poverty, the neighborhood should have institutional and social resources to foster healthy child development. The development of an opportunity-index specific to child development may help identify such child-friendly communities within a metropolitan region or help to identify communities that need improvement in this regard. Second, even if families move into neighborhoods with opportunities for children, residing in such communities needs to go hand-in-hand with links to institutional and social resources. Evidence from the Moving to Opportunity study referenced earlier has shown that some families who moved to low-poverty neighborhoods did not always have access to better schools, primarily because most families (about 70 percent) stayed in the same school district (Ferryman et al. 2008). This evidence provides support for the need to link housing choices to actual opportunities for children by, for example, using measures of school quality and social environment (such as percentile rank on state exams, poverty rate, and exposure to white classmates and students with limited English proficiency) to define neighborhoods of opportunity and provide information and counseling.
to assist families in moving to those communities. The aim of housing policy should be to improve the choice sets of developmental contexts for all children.

An example of a place-based intervention that has received great attention for its effects on children is the Harlem Children’s Zone (HCZ). The Department of Education has recently developed a neighborhood-based initiative, called Promise Neighborhoods, modeled after the HCZ. Although some elements of Promise Neighborhoods replicate those found in previous community-development initiatives, two elements are novel: a strong focus on a pipeline approach to child development (addressing the needs of children and parents from “cradle to college”) and a commitment to serving a large number of families to have a communitywide impact (PolicyLink 2009). Although by definition a place-based initiative like the HCZ does not seek to improve neighborhood or school choices beyond the community, the program is considering equity of opportunity in a regional sense. Its evaluation framework indicates that Promise Neighborhoods sites will be asked to analyze not only their neighborhood data, but also data for the larger jurisdictions (cities and school districts) and the regions within which they are located, and set targets related to closing the gaps in health and academic success between children within Promise Neighborhoods and children in the region (Jean-Louis et al. 2010).

Although people-based policies are often compared to place-based policies, housing-policy experts increasingly agree that both people- and place-based policies are needed (Katz 2004). As coauthors Deborah L. McKoy, Jeffrey M. Vincent, and Ariel H. Bierbaum show in chapter 16 in this volume, there is increasing awareness that housing and school policies should be connected. For example, families on housing assistance should be encouraged to use their housing subsidies in areas with high-performing schools. Some housing interventions, such as a housing desegregation program in Baltimore (powell 2005) and a recent initiative to build affordable housing in Massachusetts, have used the Kirwan Institute opportunity index to identify and help direct families and new housing to high-opportunity areas (Massachusetts Housing Partnership 2009). An opportunity index specific to child and youth development could have similar policy applications. Public policy should therefore link families to neighborhoods and schools with resources to support healthy child development. An opportunity framework specific to child development may inform policies aimed at improving neighborhood and school choices for all children. An opportunity framework is more tenable from a legal and policy standpoint than a race-based framework and may also yield favorable results.
CONCLUSION AND POLICY RECOMMENDATIONS

Throughout this chapter we have argued for integration of the research on contextual influences on child development and child resilience and the research on racial and ethnic inequality (including child racial and ethnic neighborhood and school segregation, and unequal geography of opportunity). The main elements of this integrative approach are the following:

• Processes of residential and school segregation result in systematic racial and ethnic differences in the quality of the developmental contexts of children (for example, neighborhood and school environments).

• Processes of residential and school segregation result in racial and ethnic differences in simultaneous exposure to challenging (that is, high-risk) developmental contexts (including double and triple jeopardy), which may result in racial and ethnic differences in child resilience.

• Both limited overlap between the distributions of developmental contexts and racial and ethnic differences in double or triple jeopardy may lead to racially and ethnically segmented trajectories of child development.

• The geography of opportunity structure may constrain decision making related to child and youth development by limiting the choice sets of supportive developmental contexts available to minority families.

• To the extent that the developmental contexts of children are place-based (that is, linked to their neighborhood of residence), an unequal geography of opportunity may result in larger racial and ethnic disparities in access to other high-quality developmental contexts (for example, childcare, early childhood education, after-school programs).

• Public policies should expand and improve the choice sets of developmental contexts facing racial and ethnic minority families (for example, neighborhood and school choices).

Research on child development would benefit from the geography-of-opportunity focus articulated throughout this chapter. Such a direction explicitly highlights racial and ethnic inequity in the developmental contexts that children experience, concentrates our data collection and analy-
ses on documenting both population-level disparities and the effects of unequal contexts on developmental processes, and identifies policies that hold promise for improving and equalizing the developmental contexts of all children.

NOTES


1. These tabulations of the American Community Survey are available online at http://www.DiversityData.org; data not shown.

2. The persistent racial disparity in birth outcomes—including low birth weight (less than 2,500 grams), preterm birth (babies born before thirty-seen weeks of gestation), and infant mortality (death during the first year of life)—is one of the most startling health trends in the United States. Low birth weight and preterm birth are strong predictors of infant mortality. For these three health indicators there is a large racial disparity disfavoring blacks. For example, infants born to black women are 260 grams lighter on average, are over 50 percent more likely to be born preterm as infants born to non-Hispanic white women, and more than twice as likely to die in the first year of life (Martin et al. 2006; Mathews and MacDorman 2007).

3. In a national sample of Canadian preschoolers Dafna E. Kohen (2002) also found that behavior problems were more common when children lived in neighborhoods that had fewer affluent residents, high unemployment rates, and low cohesion (akin to social capital).

4. In their book Nudge, coauthors Richard Thaler and Cass Sunstein (2008) have discussed how the context in which individuals make choices (that is, their choice set and how it is ordered) influences decision making. Most of the examples used in the book are not specific to children. However, their chapter on improving school choices is relevant. Under the No Child Left Behind (NCLB) Act of 2001, if a child is attending an “underperforming school,” parents have the right to request a school transfer or supportive services. There is evidence that very few parents do so, however. The authors attributed this to “status quo bias” as well as school districts’ practice of providing limited information on the school choices available and the cumbersome process of applying for a transfer. In addition to the cognitive biases described by the authors, a major structural constraint they do not factor in is that NCLB only allows children to transfer within their own school district, which severely limits their choice set.

5. In fact, Newton schools with the maximum share of black and Hispanic or low-income students have lower shares of those students than do the Cambridge and Boston schools with the minimum shares of black and Hispanic or low-income students.

6. This is from the Memorandum of Decision from the U.S. District Court for the District of Maryland’s 2005 Carmen Thompson v. HUD case, pages 11 and 13.

7. In contrast to MTO, an earlier housing-desegregation program (Gautreaux), which resulted from a court-mandated desegregation decision in Chicago in the
1970s and was thus based explicitly on neighborhood racial-composition criteria (instead of on neighborhood poverty criteria), did provide access to better schools: about 88 percent of children who moved to the suburbs attended schools with above-average levels of academic achievement (Rosenbaum and DeLuca 2009).

8. To become a Promise Neighborhood, an applicant would have to show that the proposed area has a childhood poverty rate of at least 30 percent, with additional indicators of childhood disadvantage, or a childhood poverty rate of at least 40 percent.

9. The Massachusetts Housing Partnership (MHP) has committed five million dollars in zero-percent-interest second-mortgage financing to support the development of affordable rental housing in suburban and high-opportunity communities. The New Neighborhood Rental Initiative Program (NRI) is targeted toward 225 communities characterized by such factors as good schools, proximity to jobs, higher housing costs, and a shortage of affordable housing. This initiative followed the 2009 report by the Kirwan Institute on the state of opportunity across Massachusetts (Reece et al. 2009).

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