

# Are Poor Neighborhoods Resource Deprived? A Case Study of Childcare Centers in New York\*

Mario Luis Small, *Princeton University*

Laura Stark, *Princeton University*

*Objective.* Many social scientists believe poor mothers are better off in middle-class than in poor neighborhoods, partly because the latter are deprived of important institutional resources. We test whether poor neighborhoods are more likely to lack one critical institutional resource, the childcare center. *Methods.* We use geocoded data on all licensed centers in the City of New York, address matched to Census tracts. We estimate logit models of presence of center in tract, testing for the linear and nonlinear effects of tract poverty level after controlling for residential instability, joblessness, ethnic makeup, and other demographic factors. We complement the analysis with documentary, interview, and ethnographic data on centers in one poor and one nonpoor neighborhood in the city. *Results.* We find (1) that the probability of presence of a childcare center does not decrease as poverty level increases; (2) the relationship depends strongly on funding source, with privately funded centers being less likely and publicly funded ones more likely to be present in poor neighborhoods; and (3) at least two factors affect why poor neighborhoods are more likely to have certain centers, the local state and the (often neglected) nonprofit infrastructure. *Conclusions.* The findings suggest that poor mothers are not necessarily better off in middle-class neighborhoods in this respect. The market assumptions underlying the initial hypothesis should be modified. More empirical research on the effect of the nonprofit sector on the prevalence of neighborhood institutions is needed.

Many researchers and policymakers suggest that poor single mothers are better off in middle-class neighborhoods than in poor ones. Part of the expected benefit is the greater presence of institutions often missing from “resource-deprived” neighborhoods. Businesses and organizations, which require the support of the middle class, are thought to become scarce as the concentration of poverty increases (Wilson, 1987, 1996). Though widely

\*Direct correspondence to Mario L. Small, Department of Sociology, Princeton University, Princeton, NJ 08544 (msmall@princeton.edu). The data used in this study are available to scholars for the purpose of replication. This project was made possible by a faculty research grant from Princeton University and by an NICHD grant (3 R01 HD039135-03S1, under Christina Paxson). We thank Wangyal Shawa for invaluable assistance in using GIS software, Judie Miller for administrative assistance, and Isamar Herrera and the reviewers and editor of *SSQ* for conversations or comments that have improved this article.

held, the hypothesis that poor neighborhoods are devoid of neighborhood institutions has been more assumed than tested.

This study is a partial test of the hypothesis, focusing on one important institutional resource for poor mothers, childcare centers. Using geocoded data on all licensed childcare centers in New York City, we test whether neighborhood poverty is negatively associated with the presence of a center. We control for important demographic factors and find, contrary to prior studies, a modest positive association; probing further, we find different effects for privately and publicly funded centers, as well as a nonlinear relationship between poverty and the log-odds of presence of a center, with the poorest neighborhoods being especially unlikely to have private centers and especially likely to have public ones. Finally, we explore the reasons behind this relationship, relying on documentary evidence, fieldwork, and quantitative data. We show that the two main factors accounting for the presence of these centers in poor neighborhoods are (1) the state (at the federal and city levels) and (2) the nonprofit sector, a generally neglected variable. We conclude by calling for more empirical tests of the resource-deprivation hypothesis and further work on the role of the nonprofit sector.

## Research on Neighborhood Institutions

### *Neighborhood Institutions*

The notion that poor neighborhoods are deprived of institutional resources is part of the tradition of social disorganization (SD) theory. Developed by Shaw and McKay (1942) to explain neighborhood differences in crime, SD theory argued that high-crime neighborhoods have higher rates of poverty, residential instability, and ethnic heterogeneity. These factors produce social disorganization, which in turn leads to crime. The theory's overall conception of poor neighborhoods was captured by the term "disorganization," which implied low levels of social control, an unwillingness by residents to intervene on behalf of the common good, and a scarcity of stable neighborhood institutions such as churches (see Sampson, 1999; Sampson and Morenoff, 1997; Wacquant, 1997).

Contemporary research in the SD tradition has expanded the work in at least two ways relevant to our question (Sampson and Groves, 1989; Sampson, 1999; Wilson, 1987, 1996). First, scientists such as Wilson (1987, 1996) have been more explicit about why neighborhood institutions become scarce. According to Wilson, institutions disappear when there are few stable middle-class families in a neighborhood: "the basic institutions in [inner-city neighborhoods] (churches, schools, stores, recreational facilities, etc.) would remain viable if much of the base of their support comes from the more economically stable and secure families" (1987:56; see also

Wilson, 1996:20). Neighborhood institutions are market-dependent institutions requiring the financial stability of the middle class.

Second, contemporary researchers have focused on the benefits not merely to communities but also to individuals, a focus that has affected the types of resources thought to be important. Shaw and McKay (1942), concerned with neighborhood crime, focused on neighborhood institutions such as churches and schools, which were said to help build local community. Current researchers such as Wilson (1987, 1996), Brooks-Gunn, Duncan, and Aber (1997a, 1997b), and Goering and Feins (2003) are especially concerned with individual-level outcomes. As such, they conceive of neighborhood institutions more broadly and include those that serve as resources for individuals, regardless of whether they build community.<sup>1</sup> Examples are recreational facilities and stores (Wilson, 1987), libraries and banks (Peterson, Krivo, and Harris, 2000), and convenience stores and childcare centers (Coulton, Korbin, and Su, 1996).

The overarching conception remains, however, that poor neighborhoods are scarce in neighborhood institutions. Wilson's work (1987, 1996) is perhaps the most influential exposition of this conception. In their widely cited book on crime, Messner and Rosenfeld (2001:33) cite, as typical, a police officer's description of a poor Chicago neighborhood: "Do you see any hardware stores? Do you see any grocery stores? Do you see any restaurants? Any bowling alleys? There is nothing here. . . . Everything we take for granted—a laundromat, a cleaner's, anything. It's not here" (also Peterson, Krivo, and Harris, 2000). The perspective is influential in important social policies, including, for example, the Moving to Opportunity (MTO) experiments (Goering and Feins, 2003). The MTO demonstration, "a large, federally funded housing experiment, was designed to learn whether improved neighborhood opportunities [i.e., assisting poor residents to move into nonpoor neighborhoods] can significantly affect the lives of low-income public housing residents" (Goering, Feins, and Richardson, 2003:3). MTO researchers have speculated that one of the benefits of middle-class neighborhoods is the greater number of neighborhood institutions. For example, Ludwig, Duncan, and Ladd (2003:156) write, about "neighborhood institutions": "A final possibility [for why neighborhoods might matter] is that neighborhoods' institutional and structural features may be the most important factor in determining how people act." Ellen and Turner (2003:325) discuss, among the benefits of leaving poor neighborhoods, that "services and institutions whose availability and quality vary across neighborhoods may . . . have a significant impact on individual outcomes. Examples include child care centers and preschools, health care facilities, and after-school activities for children and teens."

<sup>1</sup>Of course, important research on communities continues (see Sampson, 1999; Peterson, Krivo, and Harris, 2000).

Nevertheless, as Ellen and Turner explain, “few . . . studies have systematically studied the role of local institutions in shaping neighborhood outcomes” (2003:329). Even fewer have studied, using reliable data, whether the “availability” of institutions such as “child care centers and preschools” truly is lower in poor neighborhoods. For example, in one of the few tests of this question, Coulton, Korbin, and Su (1996) asked caregivers of young children in block groups at high and low risk of child maltreatment whether facilities such as supermarkets and childcare centers were available in their neighborhoods. Those in low-risk neighborhoods did, in fact, report significantly higher availability. However, these findings are based on subjective perceptions, not objective tabulations of available resources.

In addition to the relative scarcity of empirical research, few researchers in this tradition have reconciled this perspective with what we know about the role of the state (Logan and Molotch, 1987). Most researchers have shared with SD theory a basic assumption that the distribution of institutional resources is driven by the market. However, federal and city governments in cities may establish policies that affect the distribution of resources across neighborhoods. Governments may well respond to actual or potential resource deprivation in poor neighborhoods by establishing tax or other business incentives (Blank, 1997:184–90; see U.S. Department of Housing and Urban Development, 1999) or by partnering with the nonprofit sector (Salamon, 1995; Smith and Lipsky, 1993).

### *Childcare Centers as Institutional Resources*

We focus on the case of childcare centers for four reasons. First, they are among the most important institutional resources for poor parents. Always an important resource, the childcare center has become almost indispensable since the passage of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996, given that mothers receiving welfare assistance are now required to work to obtain benefits (Administration for Children and Families, 2003a). Second, contrary to other institutional resources, childcare centers may be fairly categorized as *neighborhood* resources, in the sense that their clients are often neighborhood residents and that parents strongly prefer centers in their own neighborhoods. In a large survey of Maryland parents, 80.4 percent preferred a childcare center near their homes, and proximity was the most important factor associated with formal childcare use, surpassing even quality, cost, or hours of operation (Maryland Committee for Children, 2003).

Third, contrary to other neighborhood institutions, there is a body of empirical research (albeit a small one) on which to build. The existing research tends to support the SD perspective, but it is based primarily on state-level, not city-level, research. Fuller and Liang (1996) use Massachusetts data to estimate childcare center supply by geographic location. They

report mixed findings: supply is higher in zipcodes where more residents rely on income supplements from welfare programs but lower in zipcodes with a high concentration of single-parent households and in the poorest 5 percent of zipcodes. Siegel and Loman (1991:28) use Illinois data and find that “zip codes with the highest concentrations of low-income families [are] less likely to have childcare centers . . . than other areas.” Queralto and Witte (1998) use tract-level data in suburban Massachusetts and find that the supply of full-day centers is significantly lower in “socioeconomically distressed neighborhoods” (1998:40). These findings, however, rely on research conducted at the level of the state or in suburban cities, while the focus of urban poverty research and SD theory is on large urban cities capable of producing high concentrations of poverty.

Finally, childcare centers provide an opportunity to examine empirically the role of the state and nonprofit sector in this context. For example, the federal government is actively involved in the distribution of childcare centers across neighborhoods via the Head Start program, which funds Head Start centers specifically in “communities” with demonstrated need (Administration for Children and Families, 2003b). However, the Head Start Act defines communities very broadly, such that the term could include “a city, county, or multicounty or multicounty unit within a State . . . , or a neighborhood or other area” (42 U.S.C. §9801 et seq.). Thus, it remains an empirical question whether state, or nonprofit, strategies actually have an impact on the observed distribution of childcare centers when poor and nonpoor neighborhoods are compared.

The study below is based on New York City childcare center data. Childcare centers alone cannot capture the depth of institutional resources in a community. Our objective is to use this case to help fill some important empirical and theoretical gaps in the literature.

## **Method**

### ***Data Sources***

We obtained an address-matched listing of all licensed childcare centers in New York.<sup>2</sup> New York is an ideal city given its large size and its heterogeneity in racial, geographic, and economic terms. In addition, New York alone accounted for one-third of the nationwide rise in ghetto poverty that Wilson (1987) hypothesized (Wilson, 1991; Jargowsky and Bane, 1991). Across all five boroughs there were 1,287 childcare centers. Our data included the centers’ addresses, which were then geocoded onto Census tracts for the city. We obtained demographic data from the 2000 Census of

<sup>2</sup>The data were current as of the fall of 2002. They were obtained from the private firm Community Cartography ([www.comcarto.com](http://www.comcarto.com)), which collected the data from official city records, performed extensive address verification, and conducted address matching.

Population and Housing, Summary File 3, and data on location of public housing units (for 1996) from HUD (U.S. Department of Housing and Urban Development, 2003).

Though this is a quantitative study, we supplement our analysis with documentary, interview, and ethnographic data. Through documentary research and interviews, we obtained comprehensive information on the New York childcare system and local and federal policies regarding center location. In addition, we canvassed nearly all childcare centers in one poor and one middle-class neighborhood in the city, interviewing directors about the centers' funding sources, relationships to other organizations, and other issues, and observing center facilities and interactions among center staff and parents.<sup>3</sup> We covered a total of 19 centers, nine of which are in the poor neighborhood.<sup>4</sup>

### *Model Estimation*

Using neighborhood-level data, we estimate logit models of the probability that there is a center in a neighborhood as a function of neighborhood poverty and other traits. Our model takes the form,  $\ln(\pi_i/1-\pi_i) = \beta(\text{Neighborhood\_Poverty})_i + \gamma(\text{Controls})_i$ , where  $\pi_i$  is the probability that neighborhood  $i$  has a childcare center,  $\beta$  is the coefficient associated with neighborhood poverty, and  $\gamma$  is a vector of coefficients associated with neighborhood-level controls. The log of the odds ( $\pi_i/1-\pi_i$ ) that there is a center in the neighborhood is assumed to be a linear function of neighborhood poverty and controls. The model is estimated via maximum likelihood (Long, 1997).

Our proxy for neighborhood is the Census tract. Tracts are imperfect proxies, since they only partly account for agreed-upon understandings of neighborhood boundaries (Small and Newman, 2001). However, with average populations of about 3,500, they are the best alternatives with respect to size and data availability (Queralto and Witte, 1998). Other easily available measures such as zipcodes often encompass multiple neighborhoods; others, such as block groups, may be too small to estimate the geographic region

<sup>3</sup>This was part of a larger project on the relationship between institutions such as childcare centers and social capital among the poor. One neighborhood is 30 percent poor with a population 85 percent African American and Latino and a median household income of \$29,000; the other is 15 percent poor, with a population 65 percent white and a median household income of \$53,000. (These figures are rounded to ensure anonymity of the centers. Center names have also been changed.)

<sup>4</sup>For the field-based component, which preceded obtaining the citywide data, we identified 29 centers from telephone directories and other public sources; these included most centers in both neighborhoods, in addition to a few centers located in an equally poor area directly adjacent to the poor neighborhood. Of the 29 centers, two were unreachable despite repeated attempts, three were nonexistent or had been shut down, and five were not appropriate for our study (e.g., they were family care).

from which a common set of individuals finds a center. Measures that take into account more accurately residents' definitions of their neighborhoods, such as "neighborhood clusters" or "localities" (Sampson, Raudenbush, and Earls, 1997), are prohibitively costly. Our sample constitutes 2,160 Census tracts in New York City.<sup>5</sup>

We focus on the presence of licensed childcare centers. Collecting data on variations in center quality is beyond the scope of this article. There is some debate about whether center quality matters significantly to poor parents, as concern for availability appears to overtake quality considerations (Blau and Hagy, 1998). Nonetheless, we focus only on licensed centers to ensure that childcare centers compared across different neighborhoods meet minimum quality standards. These standards include board certification for teachers, nutritious meals, and strict teacher-child ratios (24 RCNY Health Code, Article 47). In addition, we do not focus on family care (i.e., care in a licensed provider's home with up to five children), where there is great variation in quality, and that is not a neighborhood institution as typically understood in the literature. Indeed, there is evidence that for children over three, parents prefer childcare centers over any other type of care when the mother is employed (Mason and Kuhlthau, 1989:597). In addition, we do not analyze mothers' use of childcare vouchers, since our concern is with childcare centers as neighborhood institutions, not with how mothers use childcare per se. Finally, we include all types of licensed centers, including for- or nonprofit, corporate, publicly funded, and Head Start centers.

### *Independent Variables*

Our independent variables are the following.

*Poverty.* The neighborhood's poverty level, measured as the proportion of persons who are poor, is the main independent variable of interest. Higher poverty levels are expected to lower the probability that a tract will have a childcare center. We test for nonlinearity in the effect (Jencks and Mayer, 1990).

*Ethnic makeup.* Ethnic makeup, and all the variables that follow, are added as controls, given that they may confound the perceived effects of poverty. Two sets of theories would provide contradictory expectations with respect to ethnic makeup. SD theory, as well as enclave theory (Portes and Rumbaut, 1996), would predict that ethnically homogeneous communities would have higher probabilities of having a center. The first would suggest that ethnically homogeneous communities have

<sup>5</sup>New York City has 2,217 Census tracts. Forty-nine tracts with no residents are excluded, as are eight tracts with missing values on independent variables (i.e., denominators equal to zero for the sex ratio or the unemployment rate). The excluded tracts contain a total of seven centers.

an easier time finding and attaining common goals of obtaining resources such as childcare centers. The second would suggest that ethnic enclaves, such as predominantly Chinese or Dominican communities, accumulate social and economic capital to attain resources such as centers. By contrast, residential segregation theory (Massey and Denton, 1993) would predict that ethnically homogenous (especially African-American and Latino) neighborhoods are likely to be less powerful politically, since they, lacking cross-race ties, have greater difficulty enforcing their neighborhood-related interests. We control for the proportion of residents who are Latino, non-Latino white, non-Latino black, non-Latino Asian, and other.

*Residential instability.* SD theory predicts that residential instability will decrease the number of institutional resources such as childcare centers. Neighborhoods with high turnover are said to evince high disorganization, since residents are not attached to the local community. As in much of the literature (e.g., Sampson, Raudenbush, and Earls, 1997), we operationalize residential instability as the proportion of people in the neighborhood whose residence in 2000 was different from their residence in 1995.

*Unemployment and joblessness.* In recent years, Wilson (1987, 1996) has emphasized the importance of joblessness, arguing that the presence of a large number of adults who are not working in a neighborhood contributes to disorganization and, thus, the disappearance of institutions such as childcare centers. We test for the percentage of the civilian labor force that is unemployed (that is, not working but actively looking for work) as well as the proportion of adults who are jobless (not working, regardless of whether they are looking for work).<sup>6</sup>

*Regional context.* New York City is large and diverse enough to allow high variation in the measures. However, an important local consideration is the differences among the boroughs. For example, Manhattan is the center of economic and political activity and it contains more centers than any of the other boroughs. Thus, we control for borough location.

*Public housing project.* We control for public housing project to distinguish this effect from that of neighborhood poverty. In addition, many housing projects have community centers with childcare centers as part of their service provision. Indeed, part of the Hope VI Program is to provide social support in communities for services such as child care (Van Ryzin, Ronda, and Muzzio, 2001; Popkin et al. 2004).

<sup>6</sup>We calculated the tract's jobless rate as  $\frac{(N_n - N_{in}) + N_u}{N_n - N_{in}}$  where  $N_n$  is the number of adults over 16 not in the labor force,  $N_{in}$  is the number of adults who are not in the labor force because they are institutionalized (e.g., in jail),  $N_u$  is the number of adults in the civilian labor force who are unemployed, and  $N_a$  is the total number of adults.



### ***Local Demand***

There have been extensive studies of the social, political, and economic factors affecting the relationship between supply and demand for childcare. For in-depth supply-demand analyses, see Hofferth and Wissoker (1992), Fuller and Liang (1996), Blau and Hagy (1998), and Queralt and Witte (1998). For our purposes, it is important to control for those variables most consistently shown to have an impact. We control for joblessness and unemployment, whereby higher rates would result in less demand for childcare. (Note that the prediction is the same as Wilson's perspective, cited earlier, but through a different mechanism.) We also control for the demographic characteristics of mothers and children in poor communities most consistently found to affect demand for childcare (Queralt and Witte, 1998)—the proportion of children under six, the number of such children, and the ratio of men to women.

### **Findings**

#### ***Basic Effect of Neighborhood Poverty***

Tables 1 and 2 present summary statistics. The dependent variable is a dichotomous indicator of whether the tract has a childcare center. Thirty-nine percent of tracts have at least one center. The average tract poverty level

TABLE 1  
Summary Statistics

Variable	Mean/Percentage	SD
Presence of childcare center	39%	
Percent in poverty	20.45	14.15
Percent non-Latino white	35.53	32.67
Percent non-Latino black	25.95	31.29
Percent non-Latino Asian	9.45	12.38
Percent Latino	24.98	22.79
Percent other race	4.09	4.80
Percent in different house in 1995	38.44	10.95
Percent under age 6	8.05	3.23
Number under age 6	298.91	224.53
Unemployment rate	10.47	8.54
Jobless rate	47.93	11.23
Males per 1 female	0.92	0.24
Presence of public housing project	21%	

NOTE:  $N = 2,160$  tracts. There are 2,217 tracts in New York City; we exclude 49 tracts with no residents, five tracts with few residents and no women (thus, no sex ratio data), and three tracts with missing unemployment rates.

TABLE 2  
Summary Statistics

	<i>N</i> Tracts
No centers	1,324
One center	516
Two centers	233
Three centers	60
Four centers	19
Five centers	7
Six centers	0
Seven centers	1
Total tracts	2,160

NOTE: Of the 57 tracts excluded, 51 had no centers, five had one, and one had two.

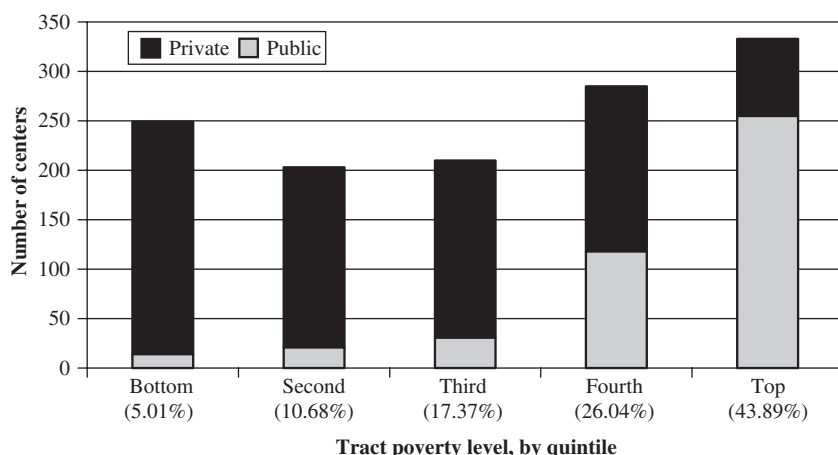
is 20.45 percent. Tracts are on average 35.53 percent white, 25.95 percent African American, 24.98 percent Latino, 9.45 percent Asian, and 4.09 percent other or multiple races. The standard deviations for these variables are rather high, indicating the presence of heavily homogenous neighborhoods. The average rate of residential instability is 38.44 percent. With respect to childcare-age children, in the average tract 8.05 percent of people are under six, with a standard deviation of 3.23; there are about 299 children per tract, with a high standard deviation of about 225. The average civilian unemployment rate is rather high, at 10.47 percent, with a high standard deviation of 8.54; the average jobless rate is 47.93 percent, with a moderate standard deviation of 11.23. The average number of males for each female in the tract is 0.92. Finally, 21 percent of the tracts have a public housing project. Table 2 shows the number of neighborhoods with no centers, and between one and (the maximum) seven centers. The modal case is the absence of centers; next is the presence of one center, with the numbers of neighborhoods decreasing sharply as the number of centers increases.<sup>7</sup>

Figure 1 displays the distribution of childcare centers across tracts by poverty level. Tracts are sorted and divided into fifths. As shown on the X-axis, the mean poverty rate for the least poor fifth of tracts is 5.01 percent, for the next quintile it is 10.68 percent, for the third quintile it is 17.37 percent, for the fourth it is 26.04 percent, and for the poorest fifth of tracts it is 43.89 percent. In Wilson’s (1991) definition of the ghetto poor neighborhood, at least 40 percent of the population in the tract must be poor; 12 percent of tracts in the city fit this category (not shown). Notably, there is

<sup>7</sup>Despite the moderate numbers of tracts with multiple centers, we estimate dichotomous (presence/absence) outcome models. This decision was based largely on parsimony. We also estimated Poisson models of the count of numbers of centers and found no substantive difference in the conclusions. Tabulations with Poisson models available on request.

FIGURE 1

Number of Childcare Centers in Tracts, by Poverty Level



NOTE: Percentages in parentheses represent the average tract poverty level in each quintile. Total numbers of centers = 1,280.

not a linear relationship between the number of centers in tracts and the poverty quintiles.

Figure 1 also presents the number of privately and publicly funded centers in the tracts. In all, 15 percent of all tracts had at least one public childcare center; 28 percent had at least one private one. There were 439 public centers in 317 tracts and 841 private centers in 595 tracts. The number of publicly funded tracts increases very slightly in each of the first three poverty categories, but then rises sharply in tracts in the fourth quintile, and more so in tracts in the fifth, suggesting public funds may be important for the poorest neighborhoods. Privately funded centers are somewhat less unevenly distributed, except in the extremes. There are only 14 publicly funded centers in the least poor quintile, but 78 private centers in the poorest quintile.

Table 3 presents logit coefficients predicting log-odds of presence of childcare center after controls; odds-ratios are shown as well.<sup>8</sup> As shown in the first pair of columns, a one percentage point increase in the tract poverty level increases the log-odds of having a childcare center by 0.005; this effect is not statistically significant and it does not support SD theory. The controls reveal a mixed pattern with respect to existing theories. Although a

<sup>8</sup>Because of the potentially high correlation among the independent variables, we examined the possibility of multicollinearity. The variance inflation factor for all variables was below 5; the average VIF was 2.07, suggesting our findings are not likely biased due to high collinearity (see Montgomery and Peck, 1982; Weisberg, 1985). Calculations and correlation matrix available on request.

TABLE 3

Logit Coefficients ( $\beta$ ) and Odds-Ratios ( $e^\beta$ ) for Model Predicting Presence of  
Childcare Center in Tract

Independent Variable	Any Childcare Center		Public Childcare Center		Private Childcare Center	
	$\beta$	$e^\beta$	$\beta$	$e^\beta$	$\beta$	$e^\beta$
Percent in poverty	0.005 (0.007)	1.005	0.050*** (0.011)	1.052	-0.028*** (0.009)	0.972
Percent non-Latino black	0.006*** (0.002)	1.006	0.017*** (0.003)	1.017	0.005** (0.002)	1.005
Percent non-Latino Asian	0.002 (0.005)	1.002	0.004 (0.008)	1.004	0.006 (0.005)	1.006
Percent Latino	-0.007** (0.003)	0.993	0.014*** (0.004)	1.014	-0.013*** (0.004)	0.987
Percent other race	-0.032*** (0.013)	0.969	-0.029 (0.024)	0.971	-0.018 (0.014)	0.982
Percent in different house in 1995	0.005 (0.005)	1.005	-0.018** (0.008)	0.982	0.022*** (0.006)	1.022
Percent under age 6	-0.060*** (0.022)	0.942	-0.028 (0.030)	0.972	-0.078*** (0.026)	0.925
Number under age 6	0.003*** (0.000)	1.003	0.002*** (0.000)	1.002	0.003*** (0.000)	1.003
Unemployment rate	0.005 (0.009)	1.005	-0.014 (0.012)	0.986	-0.003 (0.012)	0.997
Jobless rate	-0.005 (0.008)	0.995	0.001 (0.013)	1.001	-0.004 (0.009)	0.996
Males per 1 female	0.369 (0.232)	1.446	0.057 (0.281)	1.059	0.350 (0.226)	1.419
Public housing present	0.412*** (0.135)	1.510	0.559*** (0.164)	1.749	-0.011 (0.115)	0.989
Bronx	-0.738*** (0.203)	0.478	-1.302*** (0.253)	0.298	-0.162 (0.224)	0.850
Brooklyn	-0.537*** (0.171)	0.585	-0.646*** (0.220)	0.598	-0.237 (0.187)	0.789
Queens	-0.684*** (0.190)	0.505	-1.380*** (0.286)	0.304	-0.302 (0.205)	0.739
Staten Island	-0.621** (0.260)	0.537	-0.652 (0.470)	0.552	-0.343 (0.274)	0.710
Constant	-0.672		-3.070		-1.179	
Log-likelihood	-1,314.510		-661.156		-1,164.978	
N	2,160		2,160		2,160	

\*\*\* $p < 0.01$ ; \*\* $p < 0.05$ ; \* $p < 0.10$ .

NOTE: Omitted race variable is non-Latino white. Omitted borough is Manhattan. Standard errors are in parentheses.

greater proportion of blacks increases the log-odds of having a center, a greater proportion of Latinos decreases them. The turn-over rate, unemployment, joblessness, and sex ratio have no significant effect and, as ex-

pected, Manhattan tracts are more likely to have centers than tracts in any other borough.

### *Variation by Center Type*

The second and third pairs of columns in Table 3 examine the type of center. As shown, neighborhood poverty does have different effects depending on funding source. Among private centers, neighborhood poverty decreases the log-odds by 0.028; among public ones, it increases the log-odds by 0.050. Both effects are statistically significant. (Most of the controls seem to affect, or fail to affect, the presence of both types of centers similarly. An increase in both proportion African-American and number of young children significantly increases the log-odds of having a public and having a private center. However, an increase in the proportion of Latinos decreases the odds of having a private center and increases the odds of having a public center in the tract; for residential instability, the opposite is true.<sup>9</sup> The presence of public housing has a positive effect on public center presence. Except for Staten Island, tracts in all boroughs are less likely to have a public center than those in Manhattan.)

Given opposite findings for public and private centers, should poor neighborhoods be thought of as resource scarce with respect to childcare centers? At least two issues should be considered. The first is quality. It is possible that the publicly funded centers are of such low quality that their presence, absent private centers, is essentially equivalent to resource deprivation. We have addressed this issue by studying only those centers meeting the New York Department of Health's strict licensing criteria. These include educational-quality criteria such as board certification in early childhood education for all teachers; health-related-quality criteria such as mandatory training sessions in controlling the spread of infectious disease; structural-quality criteria such as mandatory cots for each child spending more than four hours at the center; and care-quality criteria such as minimum teacher-child ratios of 1:8 for children under one year of age, 1:10 for children one to three years old, and 1:15 for children three to four years old. There are many other restrictions (see 24 RCNY Health Code, Article 47 (updated through December 31, 2003)). Our observations of both public and privately funded centers were consistent with these standards. All centers in our quantitative sample fall under this licensing threshold. Publicly funded centers seem a viable resource with respect to minimum quality.

The second issue is opportunity. Which childcare centers are realistic options for poor mothers? Consider the Healthy Children childcare center, a

<sup>9</sup>We explored the residential instability effect and found no nonlinearity and no obvious explanation. Further research into this question is necessary, though beyond the scope of this article. One possibility is that the positive effect for privates is an indicator of gentrification, as private centers seek neighborhoods with young affluent families.

privately funded, for-profit center we observed in the middle-class neighborhood. The center cares for 95 children; its weekly fees are \$315 per five full days of care for a preschooler and about \$335 per five days for a toddler. Registration is \$100. A single mother with one preschooler and one toddler living in New York City and working a minimum wage job would make \$5.15 an hour, or \$206 a week, assuming a 40-hour work week. Childcare alone would cost her \$650 per week in this center. The situation would be only slightly better in a nonprofit private center. The Positive Values center is a privately funded, religious nonprofit located in a church basement in the same neighborhood. Its weekly fees are much lower, \$195 for children ages two to five, plus a \$100 registration fee. Still, childcare here would be prohibitively expensive for this hypothetical mother, at \$390 a week. Poor mothers seeking formal childcare in New York are effectively dependent on publicly funded centers. These particular centers become more difficult to come by as the neighborhood increases in income.

### *Nonlinearity in the Effect of Poverty*

Table 3 assumes a linear relationship between poverty level and log-odds of presence of a center. However, the distribution of poverty itself across neighborhoods is skewed, as shown on the X-axis of Figure 1; only a small portion of neighborhoods are very poor and these are the neighborhoods of interest. The single linear metric may mask more complex relationships. An important possibility is that those poor neighborhoods with high numbers of publicly funded childcare centers are the “best” among the poor neighborhoods—those possessed of a small but influential middle class (Wilson, 1996). Public funds slated for poor neighborhoods might be secured by those low-income neighborhoods that still have a sizeable enough middle class to provide the skills and networks to gain access to public monies. By this logic the poorest neighborhoods would have the fewest public centers, while somewhat poor neighborhoods would have more public centers than either middle-class or very poor neighborhoods. In Table 4, we examine this possibility, following Hosmer and Lemeshow (1989). The table exhibits the effects of poverty levels divided into quintiles, with the bottom quintile (least poor) as the omitted category, and it presents public- and private-center dependent variables separately.

We first discuss the log-odds of having a private center. All other factors held constant, being in the second poverty quintile as opposed to the least poor decreases the log-odds that there is a center by 0.308. Stated differently, all other factors held constant, a tract in the second quintile has odds 0.735 as high as one in the first quintile of having a private center. Being in the third quintile decreases the log-odds by 0.322, being in the fourth by 0.370, being in the fifth by 1.041. This relationship is displayed more intuitively in Figure 2, which presents predicted probabilities that a tract

TABLE 4

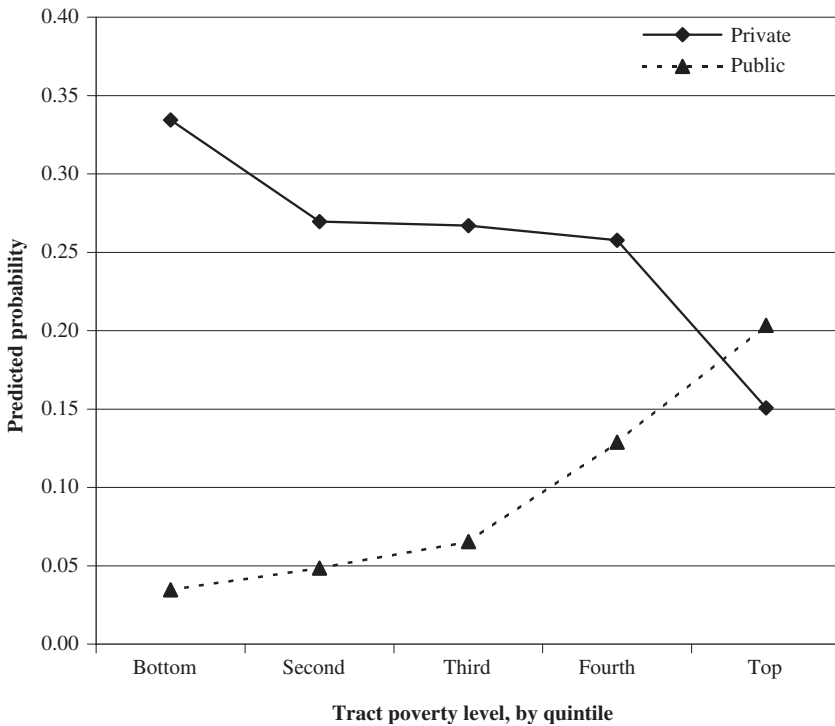
Logit Coefficients ( $\beta$ ) and Odds-Ratios ( $e^\beta$ ) for Models Predicting Presence of  
Childcare Center in Tract, with Poverty Level in Quintiles

Independent Variable	Public Childcare Center		Private Childcare Center	
	$\beta$	$e^\beta$	$\beta$	$e^\beta$
Second poverty quintile	0.350 (0.410)	1.419	-0.308* (0.161)	0.735
Third poverty quintile	0.667* (0.409)	1.949	-0.322* (0.185)	0.725
Fourth poverty quintile	1.414*** (0.417)	4.113	-0.370* (0.222)	0.691
Fifth poverty quintile	1.961*** (0.478)	7.108	-1.041*** (0.311)	0.353
Percent non-Latino black	0.014*** (0.003)	1.014	0.005** (0.002)	1.005
Percent non-Latino Asian	0.001 (0.008)	1.001	0.005 (0.005)	1.005
Percent Latino	0.010** (0.004)	1.010	-0.014*** (0.004)	0.986
Percent other race	-0.034 (0.025)	0.966	-0.019 (0.014)	0.982
Percent in different house	-0.021*** (0.009)	0.979	0.021*** (0.006)	1.022
Percent under age 6	-0.005 (0.028)	0.995	-0.083*** (0.025)	0.921
Number under age 6	0.002*** (0.000)	1.002	0.003*** (0.000)	1.003
Unemployment rate	0.000 (0.012)	1.000	-0.004 (0.011)	0.996
Jobless rate	0.006 (0.012)	1.006	-0.008 (0.009)	0.992
Males per 1 female	0.152 (0.283)	1.165	0.306 (0.223)	1.358
Public housing present	0.539*** (0.164)	1.714	-0.023 (0.155)	0.977
Bronx	-1.184*** (0.256)	0.306	-0.101 (0.225)	0.904
Brooklyn	-0.592*** (0.221)	0.553	-0.238 (0.190)	0.788
Queens	-1.169*** (0.292)	0.311	-0.254 (0.205)	0.776
Staten Island	-0.579 (0.476)	0.561	-0.328 (0.274)	0.720
Constant	-3.216		-1.026	
Log-likelihood	-659.581		-1,163.754	
N	2,160		2,160	

\*\*\* $p < 0.01$ ; \*\* $p < 0.05$ ; \* $p < 0.10$ .

NOTE: Omitted quintile is least poor. Omitted race variable is non-Latino white. Omitted borough is Manhattan. Standard errors are in parentheses.

FIGURE 2  
 Predicted Probability of a Childcare Center in Tract, by Poverty Level  
 $N = 2,160$



with average measured characteristics will have a private center, by poverty level. The figure shows moderate decreases after an initial drop and then a sharp tipping point between the fourth quintile, with a probability of 25.8 percent, and fifth quintile, with a probability of 15.1 percent. Private centers especially shy away from the poorest neighborhoods.

With respect to public centers the opposite is true. As exhibited in Table 4, there is no statistically significant difference between the first and second quintile, but each higher quintile increases the log-odds of having a center. Being in the third increases them by 0.667, being in the fourth by 1.414, being in the fifth by a dramatic 1.961. As shown in Figure 2, the probabilities that an average tract in the first, second, or third poverty quintiles will have a public center are each below 7 percent. However, the probability increases dramatically in the fourth quintile to 12.9 percent and even more so in the fifth quintile to 20.1 percent. Importantly, it is not the moderately poor but the very poor neighborhoods that have the highest probability of



having a public center. (The control variables in Table 4 show the same patterns as those in Table 3.)

### ***Why Public Centers are More Likely to be Present in Poor Neighborhoods***

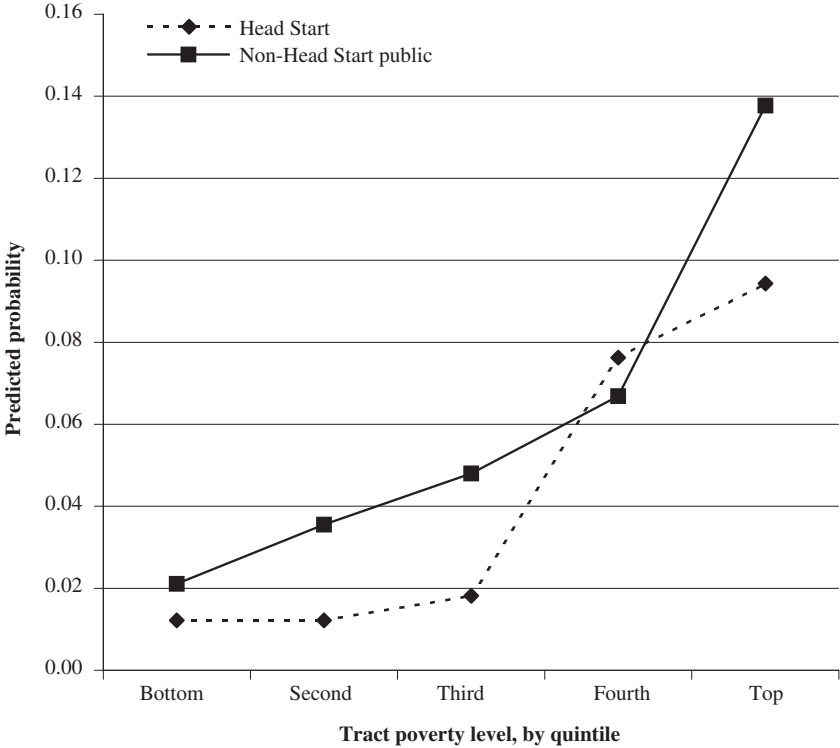
The patterns with respect to public childcare centers deserve greater examination. We previously discussed the role of the state in funding programs such as Head Start. However, not all public centers in New York are Head Start. Below (based on key informant and documentary data) we expand on these mechanisms, and show that the market conception should incorporate not only the role of the state but also that of the nonprofit sector.

There are two main types of publicly funded centers in the city: Head Start centers, which receive funds from the federal government, and Administration for Children's Services (ACS) centers, which receive funds from the city. In New York, both types of centers are administered by the ACS. (ACS also offers vouchers that may be used by poor families at private centers. Please note, furthermore, that ACS has undergone and continues to undergo radical administrative changes, including the elimination and absorption of the former Agency for Child Development, which supported its own centers.)

Head Start centers are established by independent organizations, usually nonprofits—these apply for funds from ACS, which approves it as a Head Start center and ensures that Head Start regulations are maintained in operation of the center (NYC Administration for Children's Services, 2003; Administration for Children and Families, 2003b). As stated earlier, these centers have a geographic component, such that the “needs assessment” required for a childcare center to get Head Start funding must demonstrate that people living in the community of the proposed center location would benefit from having a subsidized center in the area. Yet “community” is defined broadly. In New York City, Head Start funding often goes to centers in neighborhoods, such as Williamsburg or Boro Park, which encompass multiple tracts (<http://www.acf.hhs.gov/programs/hsb/pdf/juneregions/KingsCountyNY.pdf>). Thus, on one hand it is clear the state actively funds resources in poor areas; on the other, it is still unclear that Head Start funds in New York go to the poorest tracts, rather than, for example, the more gentrified or already resource-rich areas of Williamsburg.

The second type of center (ACS) is also operated by independent nonprofit organizations. The latter request funding from the ACS to establish a center, and the organizations manage and operate the centers following general ACS guidelines. These nonprofit associations are not held to the same place-based criteria as Head Start centers. The nonprofit sector is large in New York, and there are 285 such centers. We uncovered that many ACS centers in our two neighborhoods were established by nonprofit organiza-

FIGURE 3  
Predicted Probability of a Public Center in Tract, by Poverty Level  
*N* = 2,160



tions explicitly targeting poor communities. Consider Latinos Together Childcare, a nonprofit ACS-funded center located in the poor neighborhood. The center boasts an impeccably clean and modern interior, in marked contrast to the gritty, graffiti-laced landscape of the block on which it is located. Nearly all its 115 children are Dominican or Puerto Rican. The center is operated by a large, well-established, neighborhood-based community service organization, La Unidad, an entity with a strong interest in improving well-being among Latinos in the city, and staffed by residents of the neighborhood and other neighborhoods. Since there is a large Latino community in the neighborhood, La Unidad runs several small organizations there. These include a drug rehabilitation center, a mental illness clinic, a community center, and a health center. Requesting ACS funds to establish a childcare center in the neighborhood was a natural extension of La Unidad's overall service-provision strategy for the area. Many community

organizations targeting specific poor or ethnic communities request ACS funding in this fashion.

Two different mechanisms appear to be in place. With respect to Head Start centers, the principal agent is the state (at the federal level), which has established an explicitly place-based policy to target poor neighborhoods (in partnership with independent nonprofits). With respect to ACS centers, the

TABLE 5

Logit Coefficients ( $\beta$ ) and Odds-Ratios ( $e^\beta$ ) for Models Predicting Presence of Any Public, Head Start Public, or Non-Head Start Public Center in Tract, with Poverty Level in Quintiles

Independent Variable	Any Public Center		Head Start Center		Public Non-Head Start Center	
	$\beta$	$e^\beta$	$\beta$	$e^\beta$	$\beta$	$e^\beta$
Second poverty quintile	0.327 (0.404)	1.387	−0.006 (0.622)	0.994	0.534 (0.508)	1.706
Third poverty quintile	0.656* (0.387)	1.927	0.406 (0.586)	1.500	0.849* (0.487)	2.337
Fourth poverty quintile	1.430*** (0.370)	4.178	1.900*** (0.503)	6.686	1.200*** (0.478)	3.320
Fifth poverty quintile	2.049*** (0.388)	7.757	2.132*** (0.531)	8.433	2.002*** (0.490)	7.406
Percent non-Latino black	0.014*** (0.003)	1.014	−0.002 (0.004)	0.998	0.020*** (0.003)	1.021
Percent Latino	0.010*** (0.004)	1.011	−0.003 (0.005)	0.997	0.017*** (0.005)	1.017
Percent in different house	−0.022*** (0.008)	0.979	−0.036*** (0.011)	0.964	−0.014* (0.008)	0.986
Number under age 6	0.002*** (0.000)	1.002	0.001*** (0.000)	1.001	0.001*** (0.000)	1.001
Public housing present	0.556*** (0.161)	1.743	0.416* (0.227)	1.516	0.557*** (0.178)	1.780
Bronx	−1.195*** (0.244)	0.303	−0.689** (0.299)	0.502	−1.128*** (0.262)	0.324
Brooklyn	−0.627*** (0.212)	0.534	−0.767*** (0.271)	0.465	−0.451** (0.230)	0.637
Queens	−1.246*** (0.272)	0.288	−1.243*** (0.391)	0.288	−1.019*** (0.309)	0.361
Staten Island	−0.580 (0.466)	0.560	−0.637 (0.655)	0.529	−0.584 (0.586)	0.558
Constant	−2.886		−2.552		−4.055	
Log-likelihood	−661.111		−393.016		−551.498	
N	2,160		2,160		2,160	

\*\*\* $p < 0.01$ ; \*\* $p < 0.05$ ; \* $p < 0.10$ .  
 NOTE: Omitted quintile is least poor. Omitted race variable is non-Latino white. Omitted borough is Manhattan. Standard errors are in parentheses.

principal agent is the nonprofit agency, which—if our observations of centers such as La Unidad reflect a broader pattern—explicitly target poor neighborhoods, despite the fact they are not required to do so.

We test these explanations in Table 5. We divide publicly funded centers into Head Start and non-Head Start centers operated by nonprofits. Based on the model for public centers in Table 4, the models in Table 5 eliminate those variables that (1) were not statistically significant in the full model and (2), in addition, did not contribute to the overall goodness of fit. (Likelihood ratio tests supported the null hypothesis that the full model was not significantly better than the nested model; [ $\chi^2(6) = 3.06$ ;  $p = 0.802$ ].) The findings are represented in probability form for an average tract in Figure 3.

As shown in Table 5, neighborhood poverty is positively associated with the presence of both Head Start and non-Head Start public centers. The Head Start centers show an especially sharp increase from the third to the fourth quintile, suggesting that Head Start centers are being established in the poorest tracts. As shown in Figure 3, an average neighborhood in the third quintile has a 1.8 percent probability of having a Head Start center, one in the fourth 7.6 percent, one in the fifth 9.4 percent. With respect to non-Head Start public centers, the increase is in the expected direction, with a sharp increase between neighborhoods in the fourth (6.7 percent) and fifth (13.8 percent) quintiles. These organizations seem to target the poorest neighborhoods of their own accord, possibly as part of larger service-provision efforts, though this would have to be investigated in future research.

## Conclusions

In New York City, the probability of finding an affordable licensed child-care center is highest in the tracts with the highest poverty levels. This finding runs contrary to some elements of SD theory and informs our understanding of an important neighborhood institution. We do not believe that mothers should, therefore, be encouraged to move to the poorest neighborhoods. Certainly, the presence of childcare centers is only one of multiple critical neighborhood indicators. More research is needed on other types of institutional resources, private and public, and in other cities to examine the applicability of this case. However, several important issues remain underexplored. Below we expand on our three main theoretical contributions.

The first results from the comparison of the current findings with those of existing empirical studies of the distribution of childcare centers. Those studies, conducted at the state level or in suburban towns, found lower probabilities of presence of centers in poorer neighborhoods, ostensibly consistent with SD theory. However, the theory and the focus of urban research is on large inner-city neighborhoods, not suburban towns. Our

analysis suggests that the distinction between city-level and state-level analyses is important, as a result (at least) of the large cities' heavy governmental influence in the conditions of poor neighborhoods and the operation of the nonprofit sector, which often targets such neighborhoods as well (see Powell, 1987). State-level analyses of tract or zipcode data tend to neglect the important effect of the citywide polity.

The second contribution is related to the finding that privately and publicly funded centers operate differently. The distinction between types of funding source within particular institutional resources is not often made, yet it underlines a key empirical distinction and points toward an important theoretical issue. The SD perspective relies on a well-known market orientation whereby ecological competition for space and resources underlies all observed geographic distributions (see discussion in Sampson and Morenoff, 1997). An extension of this premise is the notion that the survival of neighborhood institutions depends mostly on market-related forces, in particular, the presence of middle-class residents in an area willing to sustain them. In this picture, the state (i.e., the government) is neither important nor necessary. Logan and Molotch (1987) have famously critiqued this perspective at the macro level, making clear that state regulatory practices, such as zoning and growth control, and incentive programs, such as urban renewal and block grants, shape, contain, and complicate the operation of the market. Our analyses suggest that these processes should be understood at a more micro level as well, with respect to the distribution of institutional resources in the inner city. This is consistent with the literature on the distribution of urban resources, which finds that the interaction between bureaucratic structures and political processes affects whether certain types of public services are available in the neighborhood (Levy, Meltsner, and Wildavsky, 1974; Kemp and Lineberry, 1982; Koehler and Wrightson, 1987).

The third contribution regards the role of the nonprofit sector. Though several scholars have pointed to the importance of the state in urban poverty research, the significance of the nonprofit sector, especially with respect to the distribution of neighborhood institutions, has been neglected (but see Powell, 1987; Kramer, 1987; Milofsky, 1987; Smith and Lipsky, 1993). If the state represents the first major missing variable in the traditional SD conception, then the nonprofit sector, we suggest, must be a close second, at least with respect to the distribution of neighborhood institutions. Scholars should investigate not merely the role of nonprofits in the presence of other types of institutions but also how the state and nonprofits interact to complicate the market picture (Smith and Lipsky, 1993). We have suggested that, with respect to childcare centers, nonprofits may be targeting the poorest neighborhoods as part of a comprehensive strategy of service provision. Certainly, however, the interests, agendas, and strategies employed by nonprofit institutions deserve greater scrutiny.

Our findings call for developing a more comprehensive picture of poor neighborhoods. The standard formula that neighborhood poverty inherently

produces disadvantaged conditions ignores the fact that states and nonprofits respond to these conditions, and that these responses sometimes have measurable effects, as was the case with childcare centers in New York City. Of course, despite the higher probability that a publicly funded center will be located in a poor, rather than a nonpoor, neighborhood, the poor are by no means well off with respect to childcare—there is still an overall shortage of childcare in New York City, with a waiting list recently reported at 36,000 (Kaufman, 2004). Moreover, complex private-public interaction questions, such as how the presence of public centers affects the probability that a private center will open, remain poorly understood. Further empirical research is needed to understand how the interaction among middle-class residents, the state, and nonprofits affect the viability of different types of institutional resources in poor neighborhoods.

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