

CHILDREN SPEAK ABOUT NEIGHBORHOODS: USING MIXED METHODS TO MEASURE THE CONSTRUCT NEIGHBORHOOD

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This study contributes to the knowledge base of community practice and research by examining the construct neighborhood from qualitative and quantitative perspectives. Mixed methodology was employed to explore the associations and discrepancies between a census measure of neighborhood based in social disorganization theory and a qualitative measure based on the voices of children (N = 59). Qualitative results indicate nine dimensions of the construct neighborhood that are not found in census-based measures of the construct. Mixed methods results demonstrate that children in both higher and lower socially disorganized neighborhoods express the presence of neighborhood resources and neighborly affiliations as well as negative neighborhood experiences. Expressions of fear, needs for safety, and qualities of unsavory characters distinguish the two types of neighborhoods. © 2008 Wiley Periodicals, Inc.

One of the major challenges facing both researchers and practitioners who seek to understand the role of neighborhoods in developmental outcomes for children and youth is how best to measure the construct of neighborhood (Aber & Nieto, 2000; Brooks-Gunn, Duncan, & Aber, 1997; Nicotera, in press). This study examines this challenge by employing a mixed methods approach to explore the associations and discrepancies between a traditional quantitative measure of neighborhood and a qualitative measure built on the lived experiences of children. The results deepen the knowledge base of neighborhood research by advancing the understanding of the construct neighborhood through (a) amplifying children's voices of their neighborhood experiences and (b) comparing those voices to a census-based measure of neighborhood typified by social disorganization theory.

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DISCOVER SOMETHING GREAT

Numerous scholars have explored the methodological problems related to the intersection of child, family, and neighborhood characteristics in predicting outcomes for young people (Coulton, Korbin, & Su, 1996; Duncan & Raudenbush, 2001; Furstenberg, Cook, Eccles, Elder, & Sameroff, 1999; Leventhal & Brooks-Gunn, 2000). However, many studies employ measures of *neighborhood* that rely on census or administrative data (e.g., crime statistics). These data provide indicators of the structural aspects of neighborhoods, but on their own they do not account for neighborhood social processes (Brooks-Gunn, et al., 1997). In fact, Aber and Nieto (2000) note that “despite nearly a hundred years of scholarly interest in neighborhoods, the question of what precisely constitutes a neighborhood remains unresolved and largely unexamined” (p.188).

Within the context of neighborhood research, there is movement to explore other means of measuring *neighborhood*. This effort is strongly exemplified by the Project on Human Development in Chicago Neighborhoods (e.g., Duncan & Raudenbush, 2001). Research such as this is critical in order to comprehend the link between structural characteristics and social processes of neighborhoods and the potential roles played by each in predicting outcomes for young people. However, even though many studies of neighborhood effects are aimed precisely at understanding and intervening in the lives young people, their voices are often conspicuously absent from measures of neighborhood. Seidman et al. (1998) support this premise, pointing out that “there has been surprisingly little work examining how objective, structural aspects of neighborhoods relate to youths’ perceptions and experiences of neighborhoods” (p. 260). In fact, one of the reasons empirical studies of neighborhood effects on child development may be inconclusive is because “the conceptual and methodological frameworks used to denote neighborhood are rarely derived from children’s perceptions of their neighborhood experiences” (Burton & Price-Spratlen, 1999, p. 78).

Mixed methods may serve as a useful tool for measuring the construct neighborhood so as to account for its structural characteristics and the subjective experiences of those who reside within it. In fact, Bryman (1992) points out that the objective features of social life are more aptly examined via quantitative approaches, while the subjective experiences or processes of social life are illuminated more readily by qualitative approaches and that the two approaches, employed together in a single study can lead to fruitful results. Furthermore, studies that employ mixed methodology for measuring neighborhood may shed light on how the two types of measures coincide or diverge. Such studies may result in our ability to develop more accurate measures of neighborhood. More accurate measures offer the potential for studies that can clearly map out the varied components of neighborhood that influence outcomes and lead the way to clearer paths toward prevention and intervention.

This paper demonstrates the use of mixed methods as a means for measuring neighborhood and provides insight into how a quantitative and a qualitative measure of neighborhood converge with and diverge from one another. The results reveal the contribution that children’s voices can lend to measuring *neighborhood* and the nuances that are obscured by relying solely on structural measures.

STUDY QUESTIONS

This research responds to one major question that furthers the exploration of measuring the construct neighborhood: What associations and discrepancies are there

between the neighborhood descriptions provided by children and the statistical indices of their neighborhoods developed from 2000 U.S. census data. This question is derived from two theoretical perspectives on neighborhoods, social disorganization theory (Shaw & McKay, 1942; Sampson & Groves, 1989; Sampson, Morenoff, & Earls, 1999) and the proposed pluralistic neighborhood theory (Aber & Nieto, 2000). Social disorganization theory would suggest that those who reside in socially disorganized neighborhoods, as defined via census tract variables, experience a lack of positive neighborhood and neighboring experiences. In light of the empirical findings that support this view, one could speculate that as neighborhood social disorganization decreases, one would expect to find neighborhoods where positive neighborhood and neighboring experiences are increasingly abundant. However, this is speculation because social disorganization theory tends to focus on deficit neighborhoods and “much of what neighborhood researchers believe constitutes ‘healthy’ neighborhoods derives from inferences from studies of what makes “unhealthy” neighborhoods” (Aber & Nieto, p. 197).

In contrast, pluralistic neighborhood theory (Aber & Nieto) would suggest that neighborhood residents have negative as well as positive neighborhood and neighboring experiences that do not necessarily coincide with structural characteristics. Hence, the question posed in this research provides an opportunity to explore the speculation of a concomitant relationship between rising levels of social disorganization and rising levels of negative neighborhood experiences versus a more variable neighborhood experience as suggested by the proposed pluralistic neighborhood theory.

METHOD

Participants

Children. The non-random, purposive sample of fourth and fifth grade public school students ($N = 59$) consists of a diverse group of boys (48%) and girls (52%) representing Euro-Americans (42.2%), Asians and Pacific Islanders (18.6%), Native Americans (15.3%), Mexican Americans (8.5%), Hispanic children of color (6.8%), African-Americans (5.1%), Hispanic Whites (1.7%), and Africans (1.7%). A total of 66 children were invited to participate in the study. Four of those children did not receive permission from their parents to participate in the study and three additional children who did have parental permission to participate in the study declined to be respondents. All children in the sample reside within an urban environment in Washington State.

The fourth-fifth grade age group was selected because this is an age where they are allowed some measure of freedom to explore their neighborhoods. Likewise, at this age children have developed the social and cognitive capacity to respond to the research questions and activities. Additionally, because children in these grades are learning about maps, neighborhoods, and neighbors, this project coincides with their regular curriculum, and reinforces their learning.

Classrooms. The schools and classrooms were selected by virtue of the investigator’s knowledge of the community to create a purposive sample of children and schools.

Administrators at each school discussed the research study with fourth and fifth grade teachers, and one teacher from each school volunteered to work with the investigator. The sample was nearly equally divided between the three different schools. These schools are located in three distinct neighborhood areas within or near an urban environment in Washington State. While the schools in this area offer “school choice” so that children don’t necessarily attend the school closest to their residence, variation was sought through differences between the three schools in terms of the general populations each serves.

The students in one school are predominantly White and lower-middle to middle-class. This classroom of respondents is represented by children who are White (58%; $n = 11$), Hispanic (21%; $n = 4$), African-American (10.5%; $n = 2$), and Asian (10.5%, $n = 2$). Thirty-seven percent ($n = 7$) of the respondents in this classroom reside in neighborhoods that would be considered high status (or low in social disorganization) and 63% ($n = 12$) reside in neighborhoods of low status (or high in social disorganization). The second school serves a range of students from lower to upper socioeconomic groups who are American Indian, African-American, Asian, and White. The respondents in this classroom are White (39%; $n = 9$), American Indian (43%; $n = 10$), African-American (9%; $n = 2$), and Asian (9%; $n = 2$). Thirty-nine percent ($n = 9$) reside in neighborhoods of high status and 61% ($n = 14$) reside in neighborhoods of low status. The third school serves a mix of students including lower and middle socioeconomic groups which are mainly Asian, White, and African-American, including numerous recent immigrants. The respondents in this classroom are White (29.4%; $n = 5$), Hispanic (29.4%; $n = 5$), Asian (35.2%; $n = 6$), and African (6%; $n = 1$). All of the respondents in this classroom (100%, $n = 17$) reside in neighborhoods of low status.

Census tracts. The fifty-nine participants represent 30 census tracts within the greater city area. The means and standard deviations of the 2000 U.S. census measures for these tracts are similar to those of the 136 tracts that constitute the surrounding city area. The sample of all 136 tracts was utilized in the quantitative data collection and analysis in order to create a more sizeable sample. The choice to utilize all 136 tracts was made after the investigator determined that the 30 tracts in which the children reside have comparable means and standard deviations on the variables employed in the Principal Components Analysis (PCA). In addition, one sample t-test results indicate no significant differences (at .05 or below) between the variables for the 30 tracts and the 136 tracts (see Table 1).

Measures and Procedures

Quantitative. The quantitative data were collected from the 2000 US Census Summary Tape File Three for the 30 tracts represented by the participants in the sample and the remaining 106 tracts in the city area for a total of 136 tracts. To locate census tracts for each participant, their addresses were geo-coded using Tele Atlas North America’s Eagle Geocoding Technology via the internet (www.geocode.com). This technology employs a “street-level data base designed for GPS-based automobile navigation, Tele Atlas North America Map’s Premium [and] the US Census Bureau’s Tiger database” (www.geocode.com). Measures selected for the study are similar to those typified in neighborhood effects studies that are framed in social disorganization theory (e.g., see Sampson & Groves, 1989; Sampson et al., 1999; Shaw & McKay, 1942), and can be

Table 1. Participant Census Tracts Compared to Surrounding City Tracts

<i>Census variable</i>	<i>Participant tracts</i>		<i>City tracts</i>		<i>T-test results</i>
	<i>mean</i>	<i>SD</i>	<i>mean</i>	<i>SD</i>	
% families with incomes \$75,000 or more	35.8	20.3	36.6	16.9	$t(29) = -.209, p = .836$
% of population below poverty line	12.8	9.9	12.5	9.5	$t(29) = .173, p = .864$
% adults 25 and older with a college education	48.5	22.3	51.3	18.6	$t(29) = -.664, p = .512$
% households receiving public assistance	3.9	4.0	3.3	3.4	$t(29) = .926, p = .362$
% 16 and older employed in managerial or professional positions	44.3	18.5	46.0	14.5	$t(29) = -.501, p = .620$
% 16 and older who are unemployed	3.8	1.8	3.7	2.0	$t(29) = .369, p = .715$
% foreign born	18.6	13.4	17.1	11.0	$t(29) = .612, p = .545$
% female headed families with children 18 years or younger	11.0	8.14	9.7	6.6	$t(29) = .942, p = .354$
% foreign born who entered the US 1995 to 2000	27.9	11.3	25.9	11.4	$t(29) = .975, p = .338$
% 5 years and older living in the same house in 1995	46.5	12.4	44.0	13.1	$t(29) = 1.137, p = .265$

found in Table one. While there are many quantitative variables, such as crime or housing statistics that could inform a measure of neighborhood, the goal of this study is to compare a traditional quantitative measure of neighborhood based on social disorganization theory to an exploratory measure based in the voices of children. Therefore, it is imperative that the census variables typified in social disorganization theory be employed in the quantitative measure. Because this study seeks to explore the two measures for discrepancies and associations it was important that there be no predetermined conceptual link between the quantitative and qualitative measures.

Qualitative. The qualitative data were derived from children's written work in response to predesigned, open-ended questions about their neighborhoods and neighbors and were collected late in the spring semester of 2001. Other data not reported here confirmed that the children understood the concepts of neighbor and neighborhood. Children wrote descriptions of their neighborhoods and neighboring experiences during smaller time segments of four 45–60-minute periods that took place over 3 weeks. The data gathering periods were scheduled at the convenience of each classroom teacher and took place at about 1- to 1 1/2-week intervals. Each teacher was present and observed during the research activities. However, the investigator explained the project and led all large group discussions and gave directions for each activity. The investigator is a former teacher of young children and planned each data gathering period to account for the attention span and energy needs of the respondents. Therefore, each 45–60-minute period was divided into 15- to 20-minute segments such that children (a) spent some time in large group conversations that elicited their understanding of the concepts of neighbor and neighborhood, (b) had opportunities to create colorful drawings of their neighborhoods as they were well as how they imagined they would like them to be, and (c) completed the written

responses to the questions noted below. Children did not spend more than 15 minutes on any one writing exercise on any one day. In order to simplify the data collection of written responses, each respondent was provided with a brief worksheet for each question. The worksheets presented each question divided into its logical parts which were followed by blank lines on which he or she could write a response. Responses varied in length from 4 to 10 sentences.

Children were introduced to the researcher who explained her interest in knowing what children think about the neighborhoods where they live and their neighbors. The researcher further explained that because she was no longer a child she was coming to them as experts on how children see and think about their neighborhoods. The children were also told that this was a research project and that unlike many other things they do in school there would be no grades assigned to their work and that there would not be any right or wrong answers to any questions the investigator asked. Each classroom teacher helped to emphasize that their work would not be graded and that there were no correct or incorrect responses to the researcher's questions. The investigator's years of experience working with young children was key to her ability to explain the purpose of the research so it was easily understood by the respondents.

The questions utilized in the study were designed to query children about aspects of their neighborhoods ("A place I like in my neighborhood is... I like it because..." and "A place I do not like in my neighborhood is... I do not like it because...") and their neighbors ("A neighbor I like is...I like this neighbor because...Some of the things this neighbor does are..."). A fourth question, also designed to further query children about their neighbors, was presented in the form of a letter such that children could write as if they were creating a letter to a neighbor they knew in order to inform that person about ways in which he or she had been helpful to them ("Dear [the name of any neighbor he or she chose)... These are some of the things I have learned from you... These are some of the ways you have helped me...".) The third question noted above provided an opportunity for respondents to consider neighbors they liked and demonstrate why this neighbor was liked as well as what kind of knowledge he or she had about that person. The fourth question provided data on potential natural helpers and supports that children have in their neighborhoods. This approach is similar to other studies that explore children's relationships to neighborhood (Burton & Price-Spratlen 1999; Figueira-McDonough 1998; Sutton 1992).

Gathering information from children across several large group settings (e.g., classrooms in different schools) requires uniformity to secure data that are comparable across settings and subjects. The use of predesigned question stems is suggested by Miles and Huberman (1994) to ensure consistency across various data collection settings. This method of data collection was helpful as it was the most effective way to allow children in the sample to respond as freely as possible within the time constraints of the classroom setting.

Data Analysis

Quantitative. Descriptives and the PCA (varimax rotation) were run on the census data for the 136 census tracts (Statistical Package for Social Sciences for Windows, version 10.0). PCA was used for confirming or disconfirming similarities between components of the construct *neighborhood* found in the tracts where the children reside and the components typified in social disorganization theory. Nonstatistical analysis explored

the data for associations and discrepancies between the qualitative results and the statistical indices from census data. Tracts were delineated into higher and lower levels of social disorganization, an approach used in other analyses (Coulton, 1996).

The levels of social disorganization were developed from the factor scores from the PCA using a regression method for estimating factor scores. This approach was used because it offers scores that are more highly correlated with their respective components than the other available methods (Tabachnick & Fidell, 1996). The factor scores from each component were summed to create a composite social disorganization score for each of the 136 tracts. The scores for each component of the composite scores were weighted equally as social disorganization theory suggests that the components vary together as a cluster with no specifications for weighting.

The break point for higher and lower levels of social disorganization is based on the distribution of the composite scores for all 136 tracts. Due to the absence of theoretical direction for the division of the tracts into higher and lower levels of social disorganization, zero was used as a mid-point with positive composite scores indicating higher levels and negative composite scores indicating lower levels of social disorganization. A histogram of the composite scores for the 30 tracts where the respondents reside closely matched that of the entire sample of tracts. The levels of social disorganization for the 30 tracts where respondents reside were compared with the qualitative results for associations and discrepancies. The resulting levels of social disorganization are more fully discussed in the quantitative results section.

Qualitative. A constant comparative analysis (Lincoln & Guba, 1985) of the written responses was employed. The software package ATLAS/ti (Muhr, 1997) was utilized. A more thorough description of the qualitative analysis can be found in Nicotera (2005). The analysis was completed on the data as a whole as the numbers within racial and ethnic categories were too small to be sufficient for separate analysis. While the investigator is able to link specific respondents and their qualitative responses to the census tract where they reside, given the very small sample size within each tract this link was not utilized in the analysis. The link of a respondent's voice to explore other high- or low-level tracts similar to their own is feasible because (a) the quantitative analysis indicates that the census variables load on components in a manner that is similar to other larger sample quantitative studies (e.g., Sampson & Groves, 1989) and (b) the similarities between the means and standard deviations of the tracts where the respondents reside and the city tracts in which they are embedded (see Table 1).

Mixed methods. While the use of content analysis, percentages, and dichotomizing the categories within qualitative data to perform a chi-square procedure diverges from a pure qualitative form of analysis, these procedures were necessary in order to perform the mixed methods analysis. The richness found within the qualitative results resurfaces in descriptions of mixed-methods results.

Variables for the chi-square were developed from the qualitative data by performing separate content analyses on data from tracts representing higher levels of social disorganization and on those with lower levels of disorganization. A priori categories for the content analysis were derived from theoretical characterizations based on social disorganization theory. Procedures for the content analysis involved counting the number of quotes related to each of the a priori categories (affiliation with neighbors, resources, and negative depictions of neighborhood residents as well as the built and natural environment) such that each respondent could only be counted once

as noting a category. This count provided dichotomous variables by which each respondent could be assessed for either the presence of a category (“yes”) or the absence of a category (“no”). The resulting dichotomous variables were employed in the chi-square analysis to test for differences between neighborhoods with a high- or low-level of disorganization. Fisher’s Exact Test was used in all but one of the analyses as expected cell frequencies were less than five (Agresti & Finlay, 1997).

It is key that the reader know that the chi-square analysis in this study is not considered a test of the null hypothesis as this investigation is purposely exploratory in order to examine the limitations of a quantitative measure (based on social disorganization theory) and whether a qualitative measure will echo what the quantitative measure and theory suggest (that there are differences between high and low level neighborhoods). Given this, chi-square results of significant differences will indicate variation *between* neighborhoods, as suggested by social disorganization theory. Nonsignificant results will indicate variation *within* neighborhoods as suggested by pluralistic neighborhood theory. The mixed methods results make this evident.

Limitations

Samples. There are limitations associated with the use of nonrandom, purposive samples. Access to a sampling frame of all of the fourth and fifth grade classrooms in the school district from which a random sample of classrooms could be drawn would have allowed for generalizing to the broader population. However, the fact that the district where the participants attend school operates under “school choice” (i.e., parents can arrange to have their child attend a particular public school even if it is not the school closest to their home) means that there is potential for more diversity within a single classroom than if the children attended schools based solely on neighborhoods. The racial demographics of the sample indicate that it is fairly diverse when compared to that of the state in which the participants reside. Also the children reside in a fairly diverse group of census tracts that are comparable to the other tracts in the surrounding city area (see Table 1). Regardless, this type of sample limits the study. However, given the exploratory nature of the study and the complexities of gaining access to children within schools for the purposes of research, the study was completed with the available sample.

There are also strengths and limitations to the sample size of children utilized for the qualitative part of this study. In qualitative studies a sample size of 59 is considered by most scholars to be more than adequate. Hill, Thompson, and Williams (1997) point out that 8 to 15 cases are recommended for establishing “consistency in findings and providing examples to initially hypothesize about the limits of those findings” (as cited in Franklin & Ballan, 2001, p. 278). Regardless of the adequate sample size, there is a limitation related to the fact that the majority of the respondents in this study reside in neighborhoods with high levels of social disorganization (e.g., high levels of poverty, unemployment, and residential instability).

Quantitative analytic procedures. A number of limitations are inherent with the use of the PCA. These include the procedure’s sensitivity to variables with limited and non-normal distributions, the influence of outliers on the results, and the use of the technique with small sample sizes (see Tabachnick & Fidel, 1996). These concerns are lessened when factor analysis based on PCA is used, when solutions contain several high loading marker variables (e.g., > .80) and when the procedure is used primarily for descriptive analyses (Tabachnick & Fidel). While the census tract sample size in this

study ($N = 136$) is somewhat small for a principal components analysis, the resulting component loadings in this analysis range from .727 to .900 and Tabachnick and Fidell note that PCA solutions with loadings $\geq .800$ do not require data sets that are quite so large. Additionally, the PCA in this study is utilized for description (as opposed to prediction) and this makes the smaller sample size less problematic. Finally, the variables load on the components in the manner suggested by social disorganization theory and exemplified in other studies related to that theory (Sampson & Groves, 1989). Even so, readers should interpret the quantitative results cautiously due to the small sample size.

Qualitative analytic procedures. Miles (1979) notes that the “most serious and central difficulty in the use of qualitative data is that the methods of analysis are not well formulated” (p. 591). Given this, the guidelines specified by Lincoln and Guba (1985) for employing the constant comparative method of analysis were followed closely. This is demonstrated by the use of local language for codes and categories and the manner in which the direct quotes from the data support the categories or dimensions of neighborhood.

Of central importance, was the effort to ensure that the voices of the children would be heard in the results. For example, it would have been easy for the researcher to list “church” as a formal resource in the category that describes neighborhood resources even though a child noted that it was something she/he disliked. Hence, while an adult may view “church” as a resource for a child whether or not the child likes it, it was important to let the child’s voice to be heard by only including items as a resource when a child noted them as a positive attribute of her or his neighborhood experiences. To strengthen this aspect of the qualitative analysis, three colleagues reviewed the data and assisted in final decisions about the face validity of the codes, categories, and their relationship to the original data. The use of ATLAS/ti (Muhr, 1997) provided consistency in data handling to support credibility (Franklin & Ballan, 2001).

Finally, the issue of dependability, which is specifically related to issues of replication, is addressed within this study in several ways. The use of predesigned questions, clear parameters of the sample demographics of the children and census tracks, and the specific use of the constant comparative method (Lincoln & Guba, 1985) create a basis for replicating this study.

RESULTS

Quantitative

Ten variables (see Table 1) were examined in the PCA using varimax rotation. The first PCA was run with the criteria of eigenvalues set to equal 1. Two components of the construct neighborhood emerged. However, the scree plot indicated the potential for the presence of three components with the eigenvalue for the third component nearing the value of 1. The analysis was rerun for three factors. In this second analysis the bivariate correlations between the variables on each component demonstrated a better fit than the initial two-factor structure.

The three components that resulted from the PCA explain a total of 79.9% of the variance. The first component, with six variables explains 53.9% of the variance. The second component with two variables explains 17.1%, and the third which also has two

variables explains 8.5% of the variance. The rotated component matrix and bivariate correlations within each component are reported in Table 2.

The first component represents levels of socioeconomic conditions within the tract and is labeled *neighborhood social status*. As expected, the loadings related to high income, high levels of education and high status occupations are all negative while the loadings related to receiving public assistance, living in a female headed household, and being foreign born all have positive loadings. Also, these variables are more highly correlated with each other than they are with any of the other variables used in the factor analysis.

The second component is *neighborhood economic deprivation* and the variables that load on it include percent unemployed and percent living below the poverty line. The correlation between these two variables is larger than either of their correlations with any of the other 10 variables ($r = .773, p = .000$). The final component is *neighborhood instability*. The two variables that load on this component are percent foreign born who entered the U.S. between 1995 and 2000 and the percent 5 years and older who resided in the same house in 1995. The two variables have a correlation of $-.547$ ($p = .000$).

The three components mirror the dimensions suggested by social disorganization theory. The first two components, neighborhood status and economic deprivation, are aligned with concentrated disadvantage. The third component is consistent with the dimension of residential stability and ethnic heterogeneity. Social disorganization theory would characterize highly socially disorganized neighborhoods as low in social status, high in economic deprivation, high in ethnic heterogeneity, and low in residential stability.

As noted in the quantitative analysis section, the factor scores from the PCA were saved in order to create a composite social disorganization score for each census tract. These scores ranged +5.38 to -2.92 where scores with a positive valance indicate high levels of social disorganization (low status) and those with a negative valance indicate low levels of disorganization (high status). The tracts with the highest and lowest composite scores of social disorganization for the 30 tracts represented by the participants are also those tracts that represent the highest and lowest composite scores of the entire 136 city tracts. The majority of the tracts ($n = 18$) score in the higher range of social disorganization (+5.38 to +.19), while 12 tracts have composite scores that place them at lower levels of social disorganization ($-.75$ to -2.92). Forty-three of the participants reside in tracts with higher levels of social disorganization, while 16 reside participants in tracts with lower level composite scores.

Qualitative

Nine dimensions of the construct “neighborhood” emerged from the qualitative analysis. These dimensions represent places and neighbors that provide opportunities for children to attain competencies that range from cognitive and physical skills to social emotional skills and capacities for nurturing of others, as well as for independence. In addition, the dimensions indicate that the children in this sample receive both tangible and intangible supports from their neighbors and that they have access to resources within the natural and built environment to support their development. Problems are also identified in reference to the absence of adequate play spaces and playmates, the presence of unsavory characters, and in relation to some of

Table 2. Result of PCA (Total Variance 79.9%)

Variables	PCA loadings							Bivariate correlations within each component									
	Income	Educ	Man/prof	Foreign born	PA	Female headed											
Component 1 (53.9%)																	
% Income over \$75,000	-.729	1															
% Education	-.900	.745*	1														
% Managerial/prof.	-.890	.847*	.920*	1													
% Foreign born	.735	-.654*	-.702*		1												
% households w/PA	.776	-.617*	-.678*			1											
% Female headed households	.738	-.605*	-.537*				.614*				1						
Component 2 (17.1%)																	
% Below poverty line	.727																
% Unemployed	.847																
Component 3 (8.5%)																	
% Foreign born entered US 1995 to 2000	.847																
% 5 years and older lives in same house as 1995	-.800																

*p = .000

the neighborhood-related emotions experienced by study participants. The dimensions of neighborhood are summarized in Table 3 (for more detail see Nicotera, 2005).

Mixed Methods

Presentation of the mixed methods results involves reporting the results of the content analysis and chi-square procedure as well as referencing the qualitative data. The content analysis of tracts with higher and lower levels of social disorganization resulted in percentages of affiliation with neighbors, resources, and negative depictions of neighborhood residents and the built and natural environment (see Table 4). The percentages suggest some similarities between higher and lower neighborhoods in categories such as neighborhood resources, neighbor affiliations, and negative sentiments about the neighborhood. At the same time, there are various categories in which there are large numerical differences between the percentages for higher and lower neighborhoods. The chi-square results (see Table 4) assist in a deeper view of

Table 3. Qualitative Results

<i>Dimensions of construct neighborhood</i>	<i>Supporting quotes</i>
1) People	"A neighbor I like is the person next to my house. She helps me in my assignment, takes me some place that I need to go to, takes care of me, gives me jobs so that I can get some money, be my friend. Some of the things this neighbor does are checks my house if I'm alright every time my mom isn't with me, gives me food when my mom didn't cook."
2) Support	
3) Competence	
4) Activities	"I like the library in my neighborhood. I like it because it is quiet and I like to read. It is also very close and it is clean." "A place I like is that the streets are not busy. I can ride my bike and scooter a lot."
5) Resources	"When I get lock[ed] out of my house she lets me go inside her house and she lets me eat in her house."
6) Natural environment	"A place I like in my neighborhood is the forest right next door to my house. I like it because I like building club houses with sticks and branches."
7) Built environment	"A place I like in my neighborhood is the alley and my tree house. I like it because all my friends and other kids in my neighborhood come and play there." "A place I do not like in my neighborhood is the bar. I do not like it because dumb stupid drunkies get drunk there."
8) The people I know	"The person next to my house helps me with my assignment, takes me someplace that I need to go, takes care of me, gives me jobs so that I can get some money, be my friend. This neighbor checks my house if I'm alright every time my mom isn't with me."
9) Feel of the neighborhood	"I do not like it because they stole my bike. They stole my trading cards." "A place I do not like in my neighborhood is nobody to play with. I do not like it because something[s] are boring by yourself." "A place I do not like in my neighborhood is my neighbor's house. I do not like it because they are mean and they yell at night and have a fight with their family members." "A place I like in my neighborhood is my apartment. I like it because it's safe."

Table 4. Percentages of Neighborhood Characteristics and Chi-Square Results

Neighborhood characteristic	Level of social disorganization		Chi-Square
	higher	lower	
% neighborhood resource	62.79	56.25	$\chi^2(1) = .086, p = .770^*$
% neighbor house resource	23.25	37.50	$\chi^2(1) = .197, p = .330^{**}$
% own home as resource	34.88	6.25	$\chi^2(1) = 4.837, p = .045^{**}$
% neighbor affiliations	83.72	93.75	$\chi^2(1) = 1.001, p = .427^{**}$
% neighbor affiliations "family"	30.23	18.75	$\chi^2(1) = .778, p = .517^{**}$
% neighbor affiliations "teacher"	11.62	12.50	$\chi^2(1) = .008, p = 1.000^{**}$
% negative sentiments	83.72	87.50	$\chi^2(1) = .129, p = 1.000^{**}$

*expected frequency cell count ≥ 5 .

**expected frequency cell count < 5 used Fisher's Exact Test.

these percentages. As the chi-square results are presented, the reader is asked to keep in mind the two theories that inform this study as described in the Study Questions section of this article. To recap here, social disorganization theory suggests the presence of statistical differences and pluralistic neighborhood theory suggests the absence of differences between the types of neighborhoods.

Neighborhood resources. We find it interesting that the gap between the percentages of neighborhood resources found in higher and lower socially disorganized neighborhoods (62.79% higher and 56.25% lower) is not particularly wide and the chi-square is not statistically significant ($\chi^2(1) = .086, p = .770$). This nonsignificant result is in line with pluralistic neighborhood theory, which suggests that residents have both positive and negative experiences of their neighborhoods that are not necessarily dependent on structural variables related to neighborhood economics and social composition. In addition, the difference between the two percentages is in the opposite direction than would be expected based on social disorganization theory. The difference between the two levels of neighborhood social disorganization in this category is further delineated by the qualitative data such that respondents in neighborhoods with high levels of social disorganization note "safety" as a feature of the resources they name. This pattern is not evidenced in the naming of resources by children in neighborhoods with lower levels of social disorganization. This distinction is in line with social disorganization theory.

In addition to general resources such as stores and parks, the participants also described the homes of neighbors as resources as well as their own homes as resources. It is in these two categories that one sees a bigger difference in percentages with a greater percentage of neighbor homes viewed as a resource among participants in lower socially disorganized neighborhoods (37.5%) and a greater percentage of own home viewed as a resource in higher socially disorganized neighborhoods (23.25%). This difference could be attributed to the theoretical view that lower socially disorganized neighborhoods engender greater connections with neighbors, while higher socially disorganized neighborhoods tend to create isolation from neighbors. However, the chi-square between the two levels of neighborhood social disorganization is not significant ($\chi^2(1) = 1.197, p = .330$). The qualitative data support this nonsignificance as similarities are found in respondents' views of neighbors' homes as places to play and eat with peers regardless of level of social disorganization. Participants in both level neighborhoods also note the presence of parents in the

home. One considerable difference noted is that the participants in the higher socially disorganized neighborhoods also note the neighbors' homes as places of refuge when they cannot enter their own homes.

In contrast to views of neighbors' homes as resources, there is a greater numerical distance between percent mentions of own home as a resource in higher level neighborhoods (34.88%) than in lower level neighborhoods (6.25%). In the qualitative data there is only one quote noting one's own home as a resource from the lower level neighborhoods. Additionally, the mention of "safety" is notable among participants in higher level neighborhoods as a reason for considering their own home as a resource. This result is consistent with the significant results of the chi-square for this category ($\chi^2(1) = 4.837, p = .045$). It is also supported by the work of Lareau (2000) who found that children in affluent neighborhoods spend more time away from home as compared to those in lower class neighborhoods where home is a major arena for play.

Affiliation with Neighbors

Residents of both higher and lower level neighborhoods provided a great deal of information related to affiliation with neighbors. A larger percentage of participants in the low socially disorganized neighborhoods (93.75%) noted affiliations with neighbors than those in neighborhoods with higher levels of social disorganization (83.72%). The chi-square did not result in significant differences ($\chi^2(1) = 1.001, p = .427$) between the two types of neighborhoods and this result is supported by the qualitative data. Regardless of residence in a higher or lower level neighborhood, participants describe important affiliations with neighbors. Quotes from both higher and lower levels demonstrate that neighbors provide tangible support such as baby sitting, meals, fixing a bicycle, and assistance with homework. Additionally, quotes from children in both types of neighborhoods indicate the presence of intangible support such as cheering up, how to grow through life, and building confidence. In general there appear to be more similarities between the quotes from the two levels than differences. This finding is supported by pluralistic neighborhood theory. There is one distinction that does arise between the different types of neighborhoods, which was noted in reference to other categories as well. This is the notation of "safety" found in affiliations with neighbors among children from more disorganized neighborhoods. In spite of this, there does not appear to be the absence of affiliation with neighbors in more disorganized neighborhoods that social disorganization theory suggests.

An interesting distinction that emerged in neighbor affiliation is the notation of parents as neighbors. Family members as neighbors are mentioned 30.23% in the data from higher level neighborhoods and 18.75% by participants in lower level neighborhoods. Participants in both higher and lower level neighborhoods mentioned moms and dads as neighbors, but those in higher level neighborhoods also mentioned other family members, such as aunts and grandparents. This greater preponderance of noting family as neighbors among participants in higher level neighborhoods because of a lack of knowledge or association with nonrelated neighbors is more in line with the social disorganization theory. However, the chi-square results for this category were not significant ($\chi^2(1) = .778, p = .517$). In addition to noting family members as neighbors, some participants who could not think of a neighbor also chose to list their teacher as a neighbor, even though the teachers did not live in the same neighborhood as the children. The percentages for this category are nearly equal between the higher (11.62%) and lower (12.5%) neighborhoods and the types of assistance provided by

teachers are similar across neighborhoods. The chi-square for this category was also not significant ($\chi^2(1) = .008, p = 1.000$) suggesting more similar than different experiences within this category between the two types of neighborhoods.

Negative depictions of residents, built, and natural environment. The final category is negative depictions of neighborhood residents and the built and natural environment. The percentage of mentions in the higher and lower level neighborhoods are nearly equal at 83.72% and 87.5%, respectively, and the chi-square did not result in significant differences between the two types of neighborhoods ($\chi^2(1) = .129, p = 1.000$). In spite of the numerical similarity of the percentages and the lack of significant differences, examination of the quotes reveal differences in perceptions between participants who reside in the two types of neighborhoods. For example, while participants in lower level neighborhoods mentioned problems with broken glass in the alley, busy streets, and homeless people, those in the higher level neighborhoods noted the presence of drug dealers, drunks, and a neighbor who shot one of their dogs. In addition to these differences, participants in both higher and lower level neighborhoods note concerns in common such as mean dogs, scary houses at Halloween, feeling bored, and muddy parks. However, there are still some qualitative differences even in these commonalities such as the participant in the lower level neighborhood who is bored from having to sit in church and another who complains about the blackberry bushes that scratch her arms as compared to participants in higher level neighborhoods who are bored because there is no one to play with and who are fearful that dogs on the loose will get hit by cars and die. Similar to the other qualitative differences between categories found between the two types of neighborhoods, there is an overall greater intensity related to concerns for safety among respondents who reside in neighborhoods with high levels of social disorganization. The numerical results for this category are supported by pluralistic neighborhood theory, while the qualitative differences are more in line with what social disorganization theory suggests.

DISCUSSION

This research employed a mixed methodology to explore the question, “What associations and discrepancies are there between the descriptions of neighborhoods provided by children and statistical indices developed from 2000 census data for their neighborhoods? The results from the constant comparative qualitative analysis indicate that children describe their neighborhoods in myriad ways that emerge as nine dimensions of the construct neighborhood. These dimensions demonstrate the nuanced experiences and perceptions of neighborhood that are absent from structural measures of the construct. They illuminate the varied voices that children can lend to our comprehension of neighborhood and suggest that unique sensitivities and personalities interact with neighborhood to form one’s experience of it. Given that developmental outcomes result from the integrated components of person and environment both subjective and structural measures of neighborhood are key in understanding and predicting developmental outcomes. Studies that further our ability to predict developmental outcomes that result from subjective neighborhood experiences as well as structural components may provide more in depth information if they include measures of neighborhood that account for lived experiences. This exploratory study provides a beginning look at these lived experiences and their

associations with and discrepancies from a structural measure of neighborhood. Future studies that incorporate the voices of neighborhood residents into measures of the construct neighborhood will add to the data presented here. We may then combine the results of such studies with those found here to develop a quantitative measure of neighborhood that could account for lived experiences and allow for future quantitative studies that move beyond the current structural measures of neighborhood in predicting developmental outcomes.

The mixed methods results are revealing on several levels as they point out associations and discrepancies between the neighborhood descriptions found in the quantitative and qualitative measures. The content analysis of data and chi-square analyses of neighborhoods with higher levels and lower levels of social disorganization indicates some numerical similarities in perceptions of neighborhood resources, affiliations with neighbors, and negative sentiments about neighborhood. Social disorganization theory would not suggest the existence of these similarities but pluralistic neighborhood theory would. The qualitative data provide a more nuanced view that illuminates differences in spite of numerical similarities and statistically nonsignificant differences. For example, while the percentage neighborhood resources among children residing in neighborhoods within higher levels of social disorganization and lower levels of social disorganization are numerically close, the children residing in more highly socially disorganized neighborhoods mentioned "safety" as an important component of a resource and those in lower socially disorganization neighborhoods do not. The consideration of a need for safety among respondents living in highly socially disorganized neighborhoods is aligned with the expectations of social disorganization theory. This message about safety is also evident in the views of one's own home as a resource among children residing in neighborhoods with higher levels of social disorganization and the fact that this is the only category in which the chi-square results reached significance. However, this nuance of safety would not be evident from employing only the structural measure of neighborhood based in social disorganization theory. It was the measure developed from the children's voices that illuminated this important nuance. This result suggests that future studies of neighborhoods and young people incorporate questions related to "safety" and its polar sentiment, "fear," into measures of neighborhood.

The mixed methods results also demonstrate, as social disorganization theory suggests, that there are more notations of neighbors' homes as resources (higher rates of connection to neighbors) among children who reside in lower socially disorganized neighborhoods. However, the chi-square for this category was not significant and suggests greater alignment with pluralistic neighborhood theory. In fact, the children who live in both types of neighborhoods have similar reasons for naming neighbors' homes as a resource (e.g., places to play, eat, and meet friends' parents). The difference between the two types of neighborhoods is illuminated by the responses of the children living in highly socially disorganized neighborhoods who note neighbors' homes as places of refuge when they are locked out of their own homes or their parent(s) are not at home. This nuance demonstrates the importance of both qualitative and quantitative methods for measuring neighborhood. For example, on one hand the higher percentage of noting a neighbor's home as a resource in neighborhoods with low levels of social disorganization is concomitant with social disorganization theory. However, on the other hand, the nonsignificant chi-square indicates no real difference between the two types of neighborhoods and is aligned

with pluralistic neighborhood theory. Finally, on a third level the qualitative data, as noted above, assists in uncovering similarities and differences between the neighborhoods.

The unexpected neighboring in higher socially disorganized neighborhoods noted above occurs again in the mixed methods results related to affiliation with neighbors. The percentages of mentions of affiliation with neighbors by children who reside on both types of neighborhoods are large. Children's descriptions of these affiliations have much in common regardless of the level of social disorganization in their neighborhood. This result is in direct contradiction to what social disorganization theory would suggest. However, quotes from the qualitative data provide a greater understanding of this contradiction in that, children from neighborhoods with higher levels of social disorganization tended to mention safety as a factor in affiliation with neighbors and those who reside in neighborhoods with lower levels of disorganization do not. Hence, while the high percentage of neighbor affiliation is not expected in neighborhoods with higher levels of disorganization, the sense of a need for safety is expected.

The importance of the mixed methods for exposing important nuances in the similarities and differences between lived experiences in higher and lower level disorganized neighborhoods is also noted in reference to negative sentiments about the neighborhood. The children who reside in the two types of neighborhoods mention negative sentiments in about equal percentages and there is not a significant difference between the two types of neighborhoods. However, the qualitative data point out vast differences in the underlying causes for these negative sentiments. While children in both types of neighborhoods note concerns that are common across the neighborhood types (e.g., mean dogs, mean neighbors, and feeling bored), those that reside in neighborhoods characterized by higher levels of disorganization note the presence of drug dealers, drunks, having a dog shot by a neighbor, and having their bicycle stolen by a neighbor.

Considered together the mixed methods results provide important implications for practice and research. In regards to practice, both micro and macro practitioners need to be aware of the potential influence a neighborhood can have on a child's perception of his or her world. For example, children and youth may present in micro practice with symptoms of anxiety and the practitioner may miss that these are related to neighborhood experiences. Additionally, the macro practitioner may meet children and youth who are reticent to participate in a neighborhood level activity if they have a sense of fear about that locale. Also, from the strengths side of the ledger, micro and macro practitioners may assume a lack of resources and neighborhood supports for children and youth who reside in neighborhoods with higher levels of social disorganization. However, the mixed methods results indicate the potential for myriad connections between a young client and his or her neighbors who could play a role in micro and macro solutions.

In addition to implications for practice there are several implications for research. The qualitative results alone, which indicate the nine dimensions of the construct neighborhood, suggest that structural measures of neighborhood have the potential to overlook major components of the construct neighborhood that may be important predictors of developmental outcomes for children and youth. Additionally, the mixed methods results point out important nuances for comprehending differences between neighborhoods with higher and lower levels of social disorganization. The similarities between the two types of neighborhoods in terms of resources, affiliation with

neighbors, and negative sentiments suggest a potential problem of structural measures of neighborhood for predicting outcomes and may contribute to our understanding of why studies of neighborhood effects often come to inconclusive ends. There is a near absence of studies that examine the outcomes of young people who reside in neighborhoods with lower levels of social disorganization, thus it is not clear whether “better” structural neighborhood characteristics actually predict “better” outcomes for the children and youth who live in those neighborhoods. Future studies that address this issue are warranted.

In summary, the results suggest that structural measures of neighborhood overlook subjective neighborhood experiences. The results indicate that fear or a need for safety is prevalent in higher socially disorganized neighborhoods as social disorganization would predict. Also, the results illuminate the nuances of lived neighborhood experience for which social disorganization theory does not account such as the high levels of perceived resources and high rates of neighbor affiliations in higher socially disorganized neighborhoods. On the whole, this study suggests that broader theories of neighborhood, such as pluralistic neighborhood theory, may provide a foundation for exploring variations within as well as between neighborhoods that have the potential to result in particular outcomes for children and youth.

REFERENCES

- Aber, M., & Nieto, M. (2000). Suggestions for the investigation of psychological wellness in the neighborhood context: Toward a pluralistic neighborhood theory. In D. Cicchetti, J. Rappaport, I. Sardler & R. Weissberg, (Eds.), *The promotion of wellness in children and adolescents* (pp. 185–219). Washington, D.C.: CWLA Press.
- Agresti, A., & Finlay, B. (1997). *Statistical methods for the social sciences* (3rd edition). Upper Saddle River, NJ: Prentice Hall.
- Brooks-Gunn, J., Duncan, G., & Aber, J. (1997). *Neighborhood poverty Vol. 1: Context and consequences for children*. New York: Russell Sage Foundation.
- Burton, L., & Price-Spratlen, T. (1999). Through the eyes of children an ethnographic perspective on neighborhoods and child development. In A. S. Hasten, (Ed.), *Cultural processes in child development* (pp. 77–96). Mahwah, NJ: Lawrence Erlbaum Associates.
- Bryman, A. (1992). Quantitative and qualitative research: Further reflections on their integration. In J. Brannen, (Ed.), *Mixing methods: qualitative and quantitative research* (pp. 57–78). Hong Kong: Avebury.
- Coulton, C. (1996). The effects of neighborhoods on families and children: Implications for services. In AJ Kahn & SB Kamerman, (Eds.). *Children and their families in big cities* (pp. 87–120). New York: Columbia University School of Social Work.
- Coulton, C., Korbin, J., & Su, M. (1996). Measuring neighborhood context for young children in an urban area. *American Journal of Community Psychology*, 24(1), 5.
- Duncan, G., & Raudenbush, S. (2001). Neighborhoods and adolescent development: How can we determine the links? In A. Booth & A. Crouter, (Eds.). *Does it take a village? Community effects on children, adolescents, and families* (pp. 105–136). Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.
- Figueira-McDonough, J. (1998). Environment and interpretation: Voices of young people in poor inner-city neighborhoods. *Youth and Society*, 30(2), 123–163.
- Franklin, C., & Ballon, M (2001). Reliability in qualitative research. In B.A. Thyer, (Ed.). *Handbook of social work research* (pp. 273–292). Newbury Park, CA: Sage Publications.

- Furstenberg, F., Cook, T., Eccles, J., Elder, G., & Sameroff, A. (1999). *Managing to make it: Urban families and adolescent success*. Chicago: University of Chicago Press.
- Lareau, A. (2000). Social class and the daily lives of children: A study from the United States. *Childhood*, 7(2), 155–171.
- Leventhal T., & Brooks-Gunn, J. (2000). The neighborhoods they live in: The effects of neighborhood residence on child and adolescent outcomes. *Psychological Bulletin*, 126(2), 309–337.
- Lincoln, Y., & Guba, E. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage Publications.
- Miles, M. (1979). Qualitative data as an attractive nuisance: The problem of analysis. *Administrative Science Quarterly*, 24, 590–601.
- Miles, M., & Huberman, A. (1994). *Qualitative data analysis: An expanded sourcebook* (2nd ed.). Thousand Oaks, CA: Sage Publications.
- Muhr, T. (1997). *ATLAS/ti* (Version 4.1). Berlin: Scientific Software Development.
- Nicotera, N. (2005). The child's view of neighborhood: Assessing a neglected element in direct social work practice. *Journal of Human Behavior in the Social Environment*, 11, (3/4), 105–134.
- Nicotera, N. (in press). Measuring neighborhood: A conundrum for human services researchers and practitioners. *American Journal of Community Psychology*.
- Sampson, R., & Groves, W. (1989). Community structure and crime: Testing social disorganization theory. *American Journal of Sociology*, 94 (4), 774–802.
- Sampson, R., Morenoff, J., & Earls, F. (1999). Beyond social capital: Spatial dynamics of collective efficacy for children. *American Sociological Review*, 64(5), 633–660.
- Schiavo, R. (1988). Age differences in assessment and use of a suburban neighborhood among children and adolescents. *Children's Environments Quarterly*, 5(2), 4–9.
- Seidman, E., Yoshikawa, H., Roberts, A., Chesir-Teran, D., Allen, L., Freidman, J., et al. (1998). Structural and experiential neighborhood contexts, developmental stage, and antisocial behavior among urban adolescents. *Development and Psychopathology*, 10, 259–281.
- Shaw, C., & McKay, H. (1942). *Juvenile delinquency and urban areas*. Chicago: University of Chicago Press.
- Sutton, S. (1992). Enabling children to map out a more equitable society. *Children's Environments*, 9(1), 37–48.
- Tabachnick, B., & Fidell, L. (1996). *Using multivariate statistics* (3rd ed.). New York: Harper Collins College Publishers.