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Neighborhood Indicators

A Review of the Literature and an Assessment of Conceptual and Methodological Issues

David S. Sawicki and Patrice Flynn

Historically there have been very few attempts to build neighborhood-level indicators as a means of measuring neighborhood problems and designing policies to address them. However, recent developments in desktop geographic information systems, combined with the devolution of social programs to the local level, have created the technology and the need for such indicators. In the history of indicator use, five lessons for neighborhood indicators stand out. First, it is imperative that the numbers have a specific policy purpose. Second, geographic indicators play a special role, more important than that of subject area indicators, because policy is administered through geographic units and because neighborhoods and cities themselves affect the quality of people's lives. Third, one must from the outset distinguish clearly between indicators that measure neighborhood well-being and indicators that measure the well-being of neighborhood residents. Fourth, to be most useful, indicators must be unbundled, that is, not tied to an overall index. Finally, the movement to use geographic indicators, especially on the neighborhood scale, is in its infancy. Neighborhood-level indicators are just beginning to be used to make and evaluate policy, and to search for the causes of change in neighborhoods and in the lives of their residents.

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The Urban Institute has launched the National Neighborhood Indicators Project (NNIP), a multi-year initiative to develop measures of changing social, physical, and economic conditions of neighborhoods in cities throughout the United States.[1] The overall objective is to help local institutions develop a comprehensive and technically sound set of indicators of neighborhood conditions, so that community residents, public officials, and civic leaders can better plan appropriate strategies to improve their communities. Two central principles underlie the project. First, the indicators must be formulated in a participatory process that includes residents and experts. Second, the indicators must be capable of affecting citizen action and public policymaking. In this paper we will examine previous indicator experiments, review the scholarly literature on this topic, and reflect on the opportunities and challenges faced by the neighborhood indicators projects.

Raymond Bauer defined the term social indicators as "... statistics, statistical series, and all other forms of evidence ... that enable us to assess where we stand and are going with respect to our values and goals, and to evaluate specific programs and determine their impact" (1966, 1). In this paper we use the terms social, urban, and neighborhood indicators. We differentiate between the geographic unit of analysis for which the data are gathered (household, census block, block group, tract, neighborhood, city, county, state, nation), and the scale at which the data are reported (all neighborhoods in one city, all states in the nation, etc.). Historically, the three terms, social, urban, and neighborhood indicators, have implied as their focus the nation (social), its metropolitan areas (urban), and small areas within a city or metropolitan area (neighborhoods).

The idea that indicators are tied to specific levels of geography can play a passive or active part in indicator development; that is, the conscious choice of geographic level may or may not be a key part of the

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indicator system. For example, the Annie E. Casey Foundation (1994) issues an annual report of indicators measuring the welfare of children. The data get reported for the nation as a whole, for many states, and for some city subareas such as New York City. In this case, geography plays a somewhat passive role. The unit of analysis is a matter of administrative convenience. By choosing to focus on states, the foundation is not implying that the state is the most important governmental unit making policy pertaining to the welfare of children. States are simply a convenient reporting unit.

In contrast, advocates of neighborhood indicators argue that the geographic place plays an active role in altering the levels of the indicators, and thus in changing the lives of the people living in those neighborhoods. The neighborhood is not viewed simply as a convenient unit of analysis. In practical terms, the neighborhood as a unit of analysis is quite inconvenient. The neighborhood is chosen because some believe that the neighborhood-level indicator can be a tool to change people's lives.

Historically there have been few attempts to develop neighborhood-level indicators. The focus has been on larger units of analysis such as cities, counties, states, and nations. However, two recent factors have combined to create a climate for the increasing use of neighborhood indicators. The first is the development of low-cost, high-powered microcomputing, including desktop geographic information systems (GIS) software. GIS software permits address-matching, the ability to take a data record, like a birth, and place the record's address on a latitude-longitude point in space and then on a map (Cooke and Maxfield 1967; Drummond 1995a). In addition to the address for the birth, the record might contain the baby's weight, extent of pre-natal care, mother's condition at birth, and mother's demographic profile. With many records located in space, the GIS can then aggregate them to any level of geography: city blocks, neighborhoods, census block groups, tracts, municipalities, and counties. Table 1 shows examples of administrative records used by The Atlanta Project Data and Policy Analysis group in support of neighborhood activities.

The second factor causing interest in neighborhood-scale indicators is the shift of responsibilities for social and economic welfare from the federal to the state and local levels, and the simultaneous emphasis on public-private partnerships and neighborhood empowerment (Wallis 1994). These approaches are the latest attempt to forge new alliances for small-area improvement.

To be successful, the new participatory approaches to neighborhood revitalization must be based on information about the social and economic conditions of these small areas and their inhabitants. This information can be supplied with modest amounts of effort by neighborhood-based information technology staffs. Thus, the focus of the Urban Institute project and this paper is on the implementation of a set of neighborhood indicators. Though "neighborhood" can be defined in many ways, our use of the term implies something less than a municipality but more than a few city blocks. Traditionally, such an area had roughly 5,000 to 10,000 inhabitants with largely similar levels of education, income, and ethnicity, and with a neighborhood elementary school at its core. Neighborhood indicators are an outgrowth of the strong interest that local leaders have maintained in urban indicators. We begin, therefore, with a review of the urban indicator movement.[2]

Urban Indicators as the Precursors of Neighborhood Indicators

Throughout the 1970s, government agencies, private research organizations, and academic institutions experimented with economic and social indicators at the local level. The major thrust was the collection of disaggregated information that would serve specific audiences. Indicator projects took the form of profiles, needs assessments, state-of-the-city report cards, citizen surveys, and socioeconomic data.

A review by the Urban Institute of indicator projects during the period 1970 to 1977 identified 58 intracity reports devoted to the description of a single city or metropolitan area (Flax 1978). Approximately half of the reports were issued by university or private research centers, and half by municipal agencies. The core subject areas differed somewhat from the national indicators projects undertaken during the first half of the century. New topics included housing, welfare, crime, transportation, and city service delivery.

Challenges in developing and using urban indicators reflected the attendant conflicts between respective users. City planners and policy-makers, for example, sought indicators that were straightforward, easily understood, and applicable to a specific program or policy. Academics, challenged to develop innovative methodologies, models, theories, and complex indices for publication, were not interested in the repetitive exercise of updating yearly reports. Thus, it was difficult to institutionalize ongoing indicators for the purpose of keeping the broad public informed. In the late 1970s, Flax concluded that "the urban indicators field is quite fragmented. It has attained only limited academic respectability and is of low priority in most cities" (28).

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TABLE 1. Examples of datasets from administrative records used by the data and policy analysis group of The Atlanta Project (TAP)

Dataset	Source	Description
City of Atlanta Crime Records	City of Atlanta Police Department	900,000 Crimes for 1989–1994 by Address
American Housing Survey	U.S. Census Special Tab	Atlanta Metro's 1991 AHS, Reported for 20 Neighborhoods Plus TAP as a Whole
Planfile Database	City of Atlanta Bureau of Planning	Zoning, Land Use, and Housing Data for 140,000 Land Parcels in TAP
1994 County and City Tax Digest	Fulton County Tax Assessor	Ownership, Occupancy, and Tax Status for 140,000 Land Parcels in TAP
Corporation for Olympic Development Housing Survey	Corporation for Olympic Development	Land Use and Building Condition Survey for 15,000 Parcels in the Olympic Ring
1990 Census of Population and Housing	U.S. Census Bureau	Block, Block-Group, and Tract Data
Fannie Mae/Freddie Mac GSE Family Public Use Data	Fannie Mae/Freddie Mac	Single-Family Home Purchases by County
Linked Birth/Death Certificates	Georgia Department of Human Resources/Centers for Disease Control	90,000 Records for 1989–1994. Data are Linked by Mother's I.D.
Urban Institute Underclass Database	The Urban Institute	Censuses of Population and Housing for 1970, 1980, and 1990 with Tract Boundaries Made Compatible
Public Housing Properties	U.S. H.U.D.	Aggregate Characteristics of Public Housing Developments' Tenants
Public Housing Residents	U.S. H.U.D.	Microdata Characteristics of Public Housing Household Tenants
TAP Geographic Information System	The Atlanta Project Data and Policy Analysis Group	An Atlas-GIS Built on a 140,000 Land Parcel Base with Dozens of Geographic and Data Layers
Georgia Power Business Customers	Georgia Power	Addresses and SIC Codes for Businesses in TAP
City of Atlanta School System	City of Atlanta Public Schools	Addresses for all Students by Type and Enrollment
Human Service Providers	The Atlanta Regional Commission	Address-Matched Profiles of Over 2,000 Providers in GIS
Death Records	Georgia Department of Human Resources	Addresses and Characteristics of All Deceased, 1989–1994
Violent Death Records	Fulton County Coroner	Addresses of Deceased, with Detailed Causes
Juvenile Offenders	Fulton County Juvenile Court	Addresses of all Juveniles in Justice System, 1988–1993
Immunization Records	The Atlanta Project Collaboration	Records of 16,000 Collected in Immunization Project
H.I.V. Patients	Georgia Department of Human Resources	Total Counts of Cases by Zip Code Since 1986

The wave of indicators projects in the 1980s and early 1990s turned to overall "quality of life" measures in states and cities (not neighborhoods). Studies started to examine well-being from multiple perspectives, economic, social, and environmental. For example, the National Civic League developed a systematic approach for communities to follow in *The Healthy Communities Handbook* (1993), which continues to serve as a tool for localities seeking benchmarks of community-based wellness.

Advances in local indicators projects captured the attention of business leaders, community activists, government officials, nonprofit service providers, educators, church leaders, and concerned citizens interested in the quality of life in their communities. These players raised new issues and concerns, hence challenging the types of information systems in place to monitor and assess economic, social, and environmental conditions. Below we highlight just a few of the more notable local efforts. A summary of several prominent indicators projects is provided in table 2.

The Quality of Life Project in Jacksonville, Florida

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TABLE 2. State and local indicators projects

Project	Funder(s)	Release Date	Periodicity	Geographic Unit	Target Year(s)
California Healthy Cities Project	Dept. of Health Services & Western Consortium for Public Health	1988	Annual	City (23)	2000
Colorado Healthy Communities Initiative	The Colorado Trust	1992	Periodic	County City Communities	
Franklin County, OH: Together 2000	Local Government	1993	Periodic	County	2000
Jacksonville Quality Indicators for Progress	Jacksonville Chamber of Commerce	1983	Annual	Duval County City	2000
Kids Count	Annie E. Casey Foundation	1990	Annual	State	
Minnesota Milestones	State Government: Minnesota Planning	1992	Annual	State County	2000 2010 2020
Oregon Benchmarks	Oregon Economic Development Department	1991	Biennial	State County Metro	1995 2000 2010
Vital Sign Indicators for Kansas City	The Greater Kansas City Community Foundation and the Ewing Marion Kauffman Foundation	1993	Periodic	County Metro Census Tract	

was one of the first and most successful examples of a community-initiated indicators project. In the early 1980s, a group of concerned citizens and public officials from the Jacksonville Chamber of Commerce and the Jacksonville Community Council Inc. (JCCI) set out to monitor Jacksonville's progress toward community improvement. A committee of about 100 volunteers articulated their vision for Jacksonville, designed indicators that reflected that vision, and identified potential data sources. In all, they came up with 74 indicators to monitor trends in nine categories: education, the economy, public safety, natural environment, health, social environment, government and politics, culture and recreation, and mobility (JCCI 1994). The indicators are supplemented with information collected directly from citizens through annual telephone surveys. Both administrative and survey data (for 1983 through 1993) are limited to Duval County, with the obvious limitation of masking geographic, socioeconomic, and racial differences within the larger metropolitan area.

The express purpose of the indicators is to monitor conditions in Jacksonville and signal where a particular course of action might be needed. The indicators reveal snapshots of the greater community and hence do not indicate causal relationships. They have been used, however, to track movement toward favorable goals. In 1991, a group of 140 volunteers in nine task forces set targets indicating a desired level for each indicator by the year 2000. Each year, the community assesses its progress and identifies the community actions needed to achieve the targets.

Oregon's state legislature, in response to rapid in-migration and concomitant pressures on its land, water, air, infrastructure, and government services, created the Progress Board in 1989 to develop measurable goals for Oregon in line with the state's strategic plan for prosperity (*Oregon Shines* 1989). In 1991, the Progress Board released the *Oregon Benchmarks,* the first measurable indicators project adopted by a state legislature to monitor a state's progress toward strategic goals. Benchmarks are grouped into those that pertain to people, to quality of life, and to the economy. A total of 259 indicators were collected from administrative records and periodic survey data. The benchmarks assess results or achievements (e.g., adult literacy) rather than efforts (e.g., money spent on literacy education). Benchmarks are also being developed by state organizations for specific counties and regions of Oregon. In addition, Partners for Human In-

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vestment, housed at Portland State University, was established to educate Oregonians about the benchmarks and how to implement them. The benchmarks, now issued biennially, serve as a reference point for institutional goal setting both in and beyond state government, assist in setting priorities and allocating resources in the budgeting process, and provide a yardstick for measuring government performance.

The Healthy Cities Project is another example of an indicators initiative that is highly visible and used extensively by citizens and policymakers, and that focuses on local issues and concerns. The project was begun by the World Health Organization in 1986, as a joint initiative of the health promotion and environmental health programs in its European Regional Office. The long-range goal is to enable all people to attain a level of health that allows them to lead socially and economically productive lives. Hundreds of cities worldwide are now involved.

The first Healthy Cities program in the United States was established in California by the Department of Health Services and the Western Consortium for Public Health in 1988.[3] The project seeks to develop responsive public policies to preserve and promote individual and community health. Public, private, and voluntary sectors work together with community residents to identify and address health priorities and related issues of livability in 23 cities.[4]

Ongoing monitoring and feedback on the California Healthy Cities Project is provided by quality of life indicators that gauge community livability against a number of quantifiable variables. Pasadena produced its first Quality of Life Index in 1992 to gauge physical, social, and economic well-being. The index is the result of extensive community consultation involving residents, a broad-based steering committee, technical advisory panels, special interest and neighborhood discussion groups, and city department heads. Fifty-five performance measures track a wide variety of factors that influence community life along ten key dimensions, including: arts and culture, the economy and employment, environment, health, housing, community safety, recreation, education, alcohol/tobacco and other drugs, and transportation. For each indicator, the Pasadena report includes a note of "what was measured," "what was found," and "what is needed." The period reviewed varies by census and administrative data availability. The Pasadena index is widely used; over 3,600 copies have been distributed in and beyond Pasadena to date. The effort is serving as a prototype for other Healthy Cities initiatives throughout the country.[5] In developing city-wide urban indicators, many researchers found that they were beginning to use administrative data as well as those reported for the city as a whole. Thus was born the idea that the data need not be reported only for the whole city, but with GIS technology could be reported also for subareas of the city—neighborhoods.

Purposes of Indicators by Geographic Scale

To discuss the possible purposes of indicators, we must first define types of indicators and specify the geographic scale at which they are applied. In fact, it is essential to specify precisely the geographic unit of analysis, because shifting units can change the results. Sawicki (1971) showed this when he used indicators of neighborhood cohesiveness to predict levels of neighborhood disorganization (crime). When he used alternative areal delineations of neighborhoods, he discovered that the significance, and even the directions, of relationships changed. This finding built on earlier revelations of problems of ecological correlation, that is, that indicators may infer the characteristics of a unit of analysis different from the one under study (Edel 1980). Robinson (1950), for example, described the case of a study of neighborhoods that found that there were higher rates of crime in neighborhoods with high proportions of Japanese. The authors then reported mistakenly that Japanese persons were criminal. Later studies showed that Japanese people were the least criminal of all ethnic groups in San Francisco. They simply lived in low-income neighborhoods where crime occurred.

To develop neighborhood indicators one must define also the terms "neighborhood" and "indicator." As noted earlier, neighborhood generally implies an area smaller than a municipality but more than a few city blocks. Given the freedom allowed us by GIS technology, communities developing local-level indicators can and should adopt the geographic delineations of neighborhoods case by case, employing the neighborhood scale and layout that is most responsive to the social forces and/or proposed actions being assessed.

Indicators range from the broad measures of societal (in our case neighborhood) performance first described by Bauer (1966) to very specific technical indicators of performance like those associated with the efficacy of a neighborhood-based children's immunization program. Table 3 shows an example from the 1969 HEW report on social indicators wherein a group of domains (i.e., topics or subject areas) and indicators for those domains are suggested for the country as a whole. In some instances, all indicators are gathered together into some type of overall index. The most prominent cross-sectional indices of geographic places are employed in the series of metropolitan ranking

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TABLE 3. Domains and indicators from the U.S. Department of Health, Education and Welfare, *Toward a Social Report*, 1969

Domains	Indicators
Health and Illness	Incidence of Diseases
	Capacity to Function
	Services Rendered
Social Mobility	Extent of Upward and Downward Mobility
	Net Upward Mobility
	Mobility of Other Groups
Physical Environment	Concentration of Substances in Air, Water and Workplace
	Housing
	Recreational Facilities
Income and Poverty	State of the Economy
	Equality of Opportunity
	Redistribution
Public Order and Safety	Extent of Crime and Victimization
	Expenditures on Protective Services
	Prison Conditions
Learning, Science, and Art	Student Achievement
	School Desegregation
	Extent of Research
	Cultural Facilities
Participation and Alienation	Participation
	Alienation

books, including *Places Rated Almanac* (Savageau and Boyer 1993). The authors gather indicators of roughly ten topics into an overall index of the quality of life in United States metropolitan areas. The National Neighborhood Indicators Project will eschew the development of any simple index. Instead, we will design separate sets of substantive indicators that have proved valuable in practice in a specific substantive area. These indicators will be gathered for subareas of cities that have been delineated using effectiveness criteria for the substantive topic at hand.

Garn, Flax, Springer, and Taylor (1976) provided a useful distinction between indicators of institutional performance and indicators of social performance. The former are measures related to (public) managerial accountability to citizens. Viewing the development of urban indicators through this lens, the authors identified indicators of social performance and indicators of institutional performance, using a school system as a case study. In short, one can develop (institutional) indicators that measure attributes of the school system and its employees as well as (social) measures of learning on the part of students that lead to improved individual and group welfare in the future. The mix of institutional service providers and consumers and their welfare is at the heart of any neighborhood indicators system.

To develop a set of responsive and effective neighborhood indicators of both institutional and social performance, one must first specify the intended client. Who will use these indicators and for what purpose? A number of possible aims exist. They include:

- Making neighborhood concerns more visible at the national level
- Generating statistics that measure meaningful change in neighborhoods
- Building capacity to systematically collect and disseminate indicators that inform and support local initiative taking
- Developing dynamic models of neighborhood change
- Evaluating the likely impact of existing and/or proposed policies on neighborhoods and/or their residents
- Measuring inequality over space and time both within and between regions
- Setting goals for neighborhood and resident improvement
- Developing surrogate census-like measures for intercensal years
- Understanding the role that the geographic mobility of residents plays in their own welfare and the welfare of their (new and old) neighborhoods

The clients who might use these neighborhood indicators include local and national researchers, government officials at various levels, private and nonprofit community-oriented groups, neighborhood organizations, and neighborhood residents.

Can any single system of neighborhood indicators address all these intended purposes and serve all possible interested clients? No one system could do that. A more productive strategy would be to encourage localities to adopt standard areal size delineations and statistical indicators by substantive area.

The Seven NNIP Sites

The pilot cities in the planning phase of the National Neighborhood Indicators Project (NNIP) are Atlanta, Boston, Chicago, Cleveland, Denver, Oakland, and Providence. The cities are similar in many ways. All have developed fairly advanced systems to collect, analyze, and disseminate local indicators. The efforts are the result of strong leadership by a central group of researchers and close collaboration among community organizations, the research community, public agencies, and private foundations. All of the pilot projects have address-level data aggregated to the self-

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defined neighborhood level. All of the pilot cities report high concentrations of people living below the federal poverty line, relative to the national rate,[6] and concomitant concerns about the long-term economic and social well-being of the city and surrounding area.

Table 4 provides background information on the seven pilot NNIP initiatives, including their institutional home, the primary research organization responsible for maintaining the databases, the year(s) the initiative began and the data were released, and the primary funders. Four of the cities were initially supported by the Rockefeller Foundation under its Community Planning and Action Projects in the late 1980s and early 1990s, which focused on enumerating conditions in urban areas with high concentrations of poverty. These projects are housed at The Boston Foundation in Boston, the Center for Urban Poverty and Social Change at Case Western Reserve University in Cleveland, the Piton Foundation in Denver, and the Urban Strategies Council in Oakland. Ongoing support is provided by local and national organizations and/or private foundations. The Atlanta Project was initiated as part of the Carter Presidential Center and is sponsored by foundations and local corporations. The Providence Plan began under the leadership and financial support of state and local government, and the Chicago effort is an amalgam of projects initiated by the Woodstock Institute and Chapin Hall Center for Children at the University of Chicago.

To date, most of the projects have collected information from the 1980 and 1990 decennial censuses and address-matched or geo-coded annual administrative records for the period 1990–1994. Table 5 lists the types of noncensus information collected in each city. Most of these data are address-matched (•), and thus are available for any kind of subarea delineation.

While similar in the types of issues examined and data collected, the cities differ in their approaches to identifying what constitutes a healthy community and to transforming data into meaningful indicators. They also disseminate through different technologies including Internet, raw data on floppy disks, tables, and/or computer-generated maps. Moreover, each city is unique in how it uses the data: to inform research, to inspire social action, and/or to formulate public policy.

For example, a novel feature of the Cleveland Area Network for Data and Organizing (CAN DO) system, designed by the Center for Urban Poverty and Social Change at Case Western Reserve University, is its availability through modem dial-in and the Internet. Once in the system, users simply specify the domains and variables of interest, the unit of analysis, the year(s) of data, and the type of output file needed. The output

TABLE 4. National Neighborhood Indicators Project description of pilot city projects

City	Indicators Project	Institutional Home	Primary Research Affiliate	Project Established	Initial Funder
Atlanta	The Atlanta Project (TAP)	The Carter Collaboration Center	Data and Policy Analysis Group @ TAP	1992	TAP & Corporate Sponsors
Boston	Boston Children and Families Database	The Boston Foundation Boston Persistent Poverty Project	Center for Applied Social Research @ Northeastern University	1988	Rockefeller Foundation & Boston Foundation
Chicago	various projects	Chapin Hall Center for Children and the Woodstock Institute	The University of Chicago and the Woodstock Institute	1988	Ford Foundation
Cleveland	Cleveland Area Network for Data and Organizing (CAN DO)	Center for Urban Poverty and Social Change	Mandel School of Applied Social Sciences @ Case Western Reserve University	1988	Rockefeller Foundation & Cleveland Foundation
Denver	The Piton Foundation Information Campaign	The Piton Foundation	The Piton Foundation	1991	Rockefeller Foundation & Piton Foundation
Oakland	various projects	Urban Strategies Council	Urban Strategies Council	1988	Rockefeller Foundation
Providence	The Providence Plan	The Providence Plan	Taubman Center for Public Policy @ Brown University	1992	City of Providence & State of Rhode Island

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TABLE 5. Noncensus data available in seven partner cities at subcity level

	ATL	BOS	CHI	CLE	DEN	OAK	PROV
				ADMINISTRATIVE RECORDS			
VITAL STATISTICS							
Births	●	●	●	●	○	○	●
Deaths	●	●	–	●	○	○	●
POLICE DEPARTMENTS							
Crimes, Arrests	●	●	–	●	○	○	●
Crime, Juvenile	●	–	●	●	–	○	●
Child Abuse/Negl.	–	–	●	–	●	–	●
Police Calls	–	●	–	–	–	○	●
PUBLIC ASSISTANCE AGENCIES							
AFDC	–	–	●	●	●	●	●
Food Stamps	–	–	–	●	●	●	●
General Assist.	–	○	–	●	–	●	●
Medicaid	–	–	●	●	●	●	●
WIC	–	–	–	–	–	●	●
Subs. Child Care	–	–	–	–	●	●	●
SCHOOLS							
Student Perf.	●	●	–	–	○	●	●
Special Educ.	–	●	●	–	○	–	●
HOSPITALS, HEALTH AGENCIES							
Hosp. Admissions	–	●	–	–	○	–	–
Hosp. Adm. (Mental)	–	–	●	–	–	–	–
Immunization	●	–	–	–	–	–	–
TAX ASSESSOR/AUDITOR							
Parcel Charact.	●	●	–	●	–	●	●
Tax. Delinq. Parcels	●	–	–	●	–	–	●
Vacant Parcels	●	●	–	●	○	●	●
Home Mortgages	–	○	–	●	–	–	–
BUILDING/PLANNING DEPARTMENTS							
Code Violations	○	–	–	–	–	–	–
Building Permits	–	–	–	●	–	–	–
PUBLIC HOUSING AUTHORITIES							
Pub. Hsg. Units	●	–	–	●	○	●	●
DEVEL. DEPARTMENT							
CDBG Expenditures	–	–	–	●	–	–	–
				SURVEYS/INVENTORIES			
FACILITIES/INSTITUTIONS							
Churches	●	–	–	–	●	●	●
Schools	●	–	–	–	●	●	●
Child Care	●	●	–	–	●	●	–
Neigh./Commun. Orgs.	–	–	–	–	●	●	●
Drug. Rehab. Svcs.	–	–	–	–	–	●	●
Family Plan. Svcs.	–	–	–	–	–	●	●

●Address-based ○Tabular
Sources: Terri Bailey, The Piton Foundation, Denver; Urban Institute Staff.

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can be downloaded directly to the user's personal computer and imported into commonly used programs. The CAN DO system has drastically cut the time and resources needed to access and extract data on Cleveland's neighborhoods. It has also expanded accessibility to government agencies, planning agencies, neighborhood development and social service agencies, and other researchers. The Center's staff can now devote more time to updating the data, responding to special requests for tables and computer-generated maps, and providing training to interested users.

The Providence Plan is unique among the NNIP projects in that it was established and funded by the city of Providence and the state of Rhode Island to inform public policy. The principal goals of the plan are to put people to work, retain the city's middle class, make the neighborhoods safe and livable, improve the quality of the public schools, provide decent and affordable housing, and revitalize downtown Providence. In 1992, the Providence Plan began working with faculty at the Taubman Center at Brown University to develop a comprehensive Geographic Information System (GIS) to collect and digitize disaggregated data relevant to the city's goals. The information, summarized in a variety of formats in the *Providence Neighborhood Fact Book* (1994), is widely used in policymaking and planning. For example, the data helped target the locations of neighborhood-based family health, education, and child development centers under the Children's Initiative funded by the Pew Charitable Trust. The Providence Plan used its GIS maps to identify the city's most distressed neighborhoods, which then became target locations for the National Park Service's urban river greenway in Providence. The GIS system was used by the Providence public schools and the Providence Blueprint for Education (PROBE) Commission to identify the location of special needs students, English-as-a-second-language students, and dropouts. Through these and numerous other examples, the Providence Plan indicators project has directly influenced the allocation of millions of dollars in existing and new public funds.

In sum, the indicators projects in the seven pilot cities aim to provide reliable and consistent information on the social and economic conditions in their respective cities, with a focus on informing discussions and policy deliberations relating to persistent poverty and neighborhood decline. The centralization of neighborhood data by the affiliated research organizations provides readily accessible information that is easily understood by a variety of people in government, the nonprofit sector, and community-based organizations.

Conceptual, Methodological and Operational Issues

Having reviewed the history of the social and urban indicators movements, examined several urban-scale experiments, and described the work of the NNIP's seven pilot cities, we turn now to several conceptual, methodological, and operational issues underlying research on neighborhood indicators and, at times, affecting how that research might be used to design public policy.

The People-Versus-Place Conundrum

The "place prosperity versus people prosperity" conundrum has a long and turbulent history in the planning and urban policy literature (Winnick 1966, Whitman 1972, Edel 1980, Bolton 1992, Snow 1995). With rapid in- and out-migration taking place in neighborhoods, one cannot measure the characteristics of spatially delineated population aggregations over time in order to judge the efficacy of policy aimed at changing the lives of those individuals. The three major types of indicators that can be associated with geographic areas are: measures that describe the characteristics of the individual residents, measures that describe statistical aggregations of people and households located in a certain geographic area at a specific time, and data that measure characteristics of the area itself, without reference to its population. We call these types of measures, respectively, microdata, aggregate data, and spatial data.

Microdata: Measures of Persons and Households. If the focus of investigation is *ex-post* evaluation of the impacts of new policies or programs *on the individuals* who reside in a specific geographic area as of a certain date, we must get information directly from those individuals to ascertain their quality of life and the changes that have occurred in that quality over time. To keep down costs, we could perform surveys on a sample of the area's residents. Unfortunately, in most circumstances there are almost no microdata samples of neighborhood residents available. Even if such samples were available, the survey instruments on which they were based probably would not have asked the questions needed to evaluate at two points in time the efficacy of the target programs or policies under investigation.

Aggregate Data: Measures of People and Households Within a Geographic Area. There are two types of measures of geographic areas: descriptions of the areas themselves, and statistical aggregations of

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the people and housing units within them at a specific point in time. Table 6 shows a list of possible geographic areas that could be used in evaluating the impacts of neighborhood efforts. Table 7 presents short lists of examples of both types of indicators.

Statistical aggregations are what the U.S. Census provides every decade in its Census of Population and Housing. Though some data are available for census blocks, most social and economic data on persons and households are available only at the block-group (1,000 people) and tract levels (4,000) or higher. Some city neighborhoods are aggregations of census tracts, but most are not. The Census Bureau provides statistical summaries for aggregations of census tracts for the metropolitan editions of the American Housing Survey (AHS).[8] The main reasons these data are not available for very small areas are related to the need for anonymity and statistical reliability. The AHS is a small cluster sample. The results of the decennial census survey (long-form) are available as single anonymous household records on CD ROM (Public Use Microdata Sample), but the smallest reporting areas contain about 100,000 people.

Measures of geographic areas themselves are usually of interest to politicians who represent geographic areas. Thus, a mayor may want to know the characteristics of a city's budget and how much is expended for police protection by precinct. Some organizations, such as human service providers, may have no interest in geographic indicators. They may be interested only in the individuals who reside in those areas. For others, the well-being of the neighborhoods themselves is the focus.

Spatial Data: Measures of Subpopulations Within a Geographic Area. There is one type of statistic that can be either place-based (producing aggregates for geographic areas) or people-based (producing microdata). That is, we can follow the fate of a group of named individuals over time, or we can follow a place over time and chronicle the changes in the changing group of people who live there.

Table 8 offers an example of this kind of dual-based statistic from The Atlanta Project (TAP). With the Centers for Disease Control, we have developed a special linked birth-death data set that contains both birth and (possible) death records for each baby born in the last six years in TAP area. The data are arranged by named mother, with all birth records associated with that mother. Thus, we can process data on the individual mother's and/or baby's well-being, or we can report on infant welfare for the TAP area or for certain neighborhoods, ignoring how individuals are faring.

Since the data set comprises individual mothers and each of their births in the time period, it would be possible to cross-tabulate the data. For example, we could ask how many teenage mothers had no prenatal checkups before giving birth to a very low-birth-weight baby. We could locate the mothers in space and create aggregate statistics for any delineation of neighborhood. This type of analysis is impossible to do when we are given data that have been previously ag-

TABLE 6. Possible units of analysis for neighborhood impact measures

Census Blocks
Census Block-Groups
Census Tracts
Groups of Census Tracts
City Neighborhoods[7]

TABLE 7. Examples of two types of measures of geographic areas

Statistical Aggregates of Population and Households
Number of persons
Number of households
Number of single-parent households
Percent of population in poverty
Average age of residents
Percent of households by race
Percent of adults in the labor force
Measures of Geographic Areas Themselves
Size of geographic area in square miles
Accessibility of supermarkets
Number of public housing units
Number of employers
Accessibility of jobs
Number of libraries
Average age of housing unit
Distance to downtown core
Distance from major employment centers
Number of public elementary schools
Presence and number of police precincts

TABLE 8. Examples of data that can be place-based or individually based: infant welfare[9]

Total number of births
Number of low weight births
Number of very low weight births
Number of births to teenage mothers by specific age
Number of births with inadequate prenatal care
Number of infant deaths by age at death
Number of births to mothers with drug or alcohol problems

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gregated by geographic area, as are all data for smaller areas that come from the U.S. Census.

The Annie E. Casey Foundation annually publishes an effective report on the status of children in the United States that provides an example of a study that could be used to answer either geographically or individually based questions. The report's data are presented by state and also for New York City and its boroughs and community districts (Citizens' Committee for Children of New York 1995). Studies like this could be used to answer "How did New York City's children do in 1980?" and "How did the (different) group living there in 1990 do?" They could also be used to answer "How did the following named children who lived in New York City at the start of some pre-natal care initiative do in the decade that followed that initiative?"

There is a distinct difference between these two types of questions. Critically important factors are the size of the geographic unit and the rates of migration of the subject population in and out of that unit. The Casey report on children in the United States is place-based, and thus shows some indicators declining in quality because of the increasing numbers of new immigrants. Yet for the United States as a whole, the statistical contamination from migration is relatively small. The New York City-based Casey study finds results more dramatic than would a similar study looking at the whole country, because changes in demographic character are more dramatic for smaller geographic areas, *ceteris paribus.*

Some cities and metropolitan areas generate a variety of statistics for neighborhoods, delineated in various ways for different time periods in an effort to measure the impacts of their policy initiatives.[10] These statistics are then compared to those for the metropolitan region and for the nation as a whole. In generating statistics for neighborhoods, it is important to be aware that the primary causes of change are often demographic. For example, crime rates in geographic areas decline when the population ages. Selective migration also can produce dramatic change in geographic areas. If, for example, public policy successfully helps many people to achieve higher levels of education and training, some will move to suburban residences and leave urban areas looking poorer (in this case educationally) than those areas were in a previous time period (Wilson 1987 and 1992; Hughes 1990).

The Distorted Results of Relying Solely on Place-Based Policies

Public policy often aims at moving individuals in order to generate improvements in geographically-based indicators. For example, the *de facto* goal of a city policy often seems to be to displace poorer households with richer ones, thus raising the socioeconomic standards of the area. The action may make the city more solvent fiscally, but the result is not necessarily an improvement in the lives of some residents.

Place-based policies can often lead to the misspecification of the individuals they target. That is, richer people living in targeted poorer areas can benefit from programs aimed at poor areas, while people living in poverty outside the same targeted areas do not benefit at all. There is also ample evidence that those who benefit most from place-based policies are often those with investments in land and buildings in the targeted areas (Edel 1980).

In this context, the greatest challenges when dealing with the people-versus-place conundrum are to find a focus and to lower the ambitions of the indicators. When investments in neighborhoods are the primary focus, for instance, the welfare of the urban poor implicitly becomes secondary. Another serious problem with developing only place-based indicators is the distinct possibility that indicators of inner-city neighborhoods will continue to decline in the foreseeable future. This could provide critics with the best evidence yet that local policy initiatives do not work (Lemann 1994). Clearly, we need to develop indicators that measure changes related to both people and places.

Alternative Methods of Defining and Delineating Neighborhoods

The term "city subarea" implies only spatial bounding, while the term "neighborhood" is both a social and a spatial concept. City subareas can be viewed as convenient entities for reporting small-area data; neighborhoods are more likely to be viewed as physical and social environments that affect the lives of their inhabitants for better or worse (Olson 1982).

Planners have delineated neighborhoods in several different ways over the years (Sawicki 1971, Galster 1986), often conflating the notions of "subarea" with "neighborhood." In many cities, nominal neighborhoods are made up of aggregated census tracts. These tracts, roughly 4,000 people in size on average, are the smallest unit of analysis for which the most reliable, detailed social and economic data on households, people, and housing are available from the Census Bureau each decade. Thus, researchers doing cross-sectional analyses of cities and their subareas use tracts (Kasarda 1988 and 1993, Ricketts and Sawhill 1988, Hughes 1989 and 1990, Gramlich, Laren and Sealand 1992, Galster and Mincy 1993). Local re-

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searchers doing cross-sectional analyses of their own city rely on tracts (Wilson 1987). However, tracts and aggregations of tracts often do not match local residents' perceptions of their neighborhoods as functioning social areas; hence the Census Bureau created the "User Defined Areas Program," which allows local planners to build neighborhoods by aggregating from the census block up. The Bureau, for a fee, then reports aggregate statistics on these areas with the same data that they had made available for tracts. This method has worked in many cities to define precise yet meaningful boundaries to neighborhoods (Ahlbrandt, Charney and Cunningham 1977).

In theory, User Defined Areas could have been constructed to reflect either residents' perceived boundaries or researchers' boundaries that resulted from "social mapping" (Entwisle 1991). Using the pattern of interaction among residents as a way to delineate neighborhoods began with the work of Festinger, Schachter and Back (1950). Constructing spatial neighborhoods from the perceptions of residents has a long history, beginning with Lynch (1960) and Jacobs (1961), and elaborated upon by Milgram et al. (1972) and Hunter (1974). More recently, Galster (1986) showed that, depending on the context, even a single resident could describe different boundaries for a neighborhood according to the subject being explored.

There are two critical factors at issue when deciding how to delineate neighborhoods for the purpose of developing indicators. The first is the question of permanency of boundaries, coupled with the availability of data. To measure change over time, the boundaries must stay constant. Neither neighborhoods created from residents' perceptions nor those defined by residents' social or behavioral habits represent permanent neighborhood boundaries. Because the residents of small areas turn over quite rapidly, so do the neighborhoods created from their characteristics (Gramlich, Laren and Sealand 1992). This argues for adopting a less behavioralist approach to defining neighborhoods, and perhaps a more strategic one.

A second key factor related to the delineation of neighborhoods is the idea of the neighborhood as an appropriate context for studying human behavior and social action. Can any one single areal delineation for neighborhoods in a city encompass all appropriate contexts for action? For example, to study the efficacy of various types of policing activities, the most appropriate areas to examine are probably neighborhoods that were delineated to reflect those policing activities. Those neighborhoods, however, might be very different from those that were delineated to test the efficacy of neighborhood health programs, or those delineated to fight off the closing of a nearby supermarket. It is impossible to delineate unique subareas and one set of neighborhood indicators within a metropolitan area that can encompass *all* relevant considerations of social life and *all* of the problems we wish to study.

The seven pilot cities in the National Neighborhood Indicators Project share an interest in designing indicators that can be used to diagnose problems, provide more effective service delivery, improve program targeting, and strengthen citizen and community empowerment. In this project, neighborhoods will be delineated using a problem-oriented approach. Data will be stored at a small unit of analysis (e.g., census block groups), so that they can be aggregated to support a variety of neighborhood delineations, depending on the specific purpose at hand.

Data Validity and Reliability

The NNIP is promoting the direct analysis of data by community residents, the *democratization of data* (Sawicki and Craig, forthcoming). Expanding the circle of analysts has its detractors, and certainly project directors must be heedful of the pitfalls in using indicators of local social conditions. At the beginning of the social indicators movement in the 1960s, Etzioni and Lehman (1967) wrote a powerful and insightful article on the dangers inherent in developing social measures. The dangers described, though applied to proposals for a system of national indicators, also apply to neighborhood indicators. Among the dangers the authors listed were:

- Fractional measurement—using a single measure that might be inadequate to embrace a rich concept
- Quantitative versus qualitative dimensions—focusing on what can be easily measured rather than on what is important about the problem
- Means versus goals—measuring the inputs to a process rather than the result of the process
- Goal models versus system models—measuring a system's goals while ignoring broader effects, which can prove dysfunctional
- Concept reduction—reducing a rich concept to a measurable indicator
- Indirect measurement—using secondary data that are not exactly a good indicator of the concept, but are easy to obtain, which can often yield fractional coverage
- Ritualistic scientism—applying elaborate statistical procedures to essentially unreliable data in a mechanical fashion
- Confusing units of analysis—people versus place, as discussed above

The dangers specifically associated with neighborhood indicators are less global and more mechanical,

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but still threaten data validity and reliability. As noted, address-matching and geocoding software open a whole new world of indicators on the neighborhood scale. However, unlike the Census Bureau's Decennial Census of Population and Housing, administrative records are very inconvenient to gather and process. They are not composed of random samples of residents or households. Different agencies use different operational definitions and aggregation methods. The data often cannot answer the questions posed. Thus, the procedures that are employed in the data gathering process often do not produce reliable data that are valid indicators of change.

Drummond (1995a) explores many aspects of data reliability in the use of address-matched data sets. The technical problems he cites include failure to achieve high rates of matching because of erroneous addresses, poor geographic reference files, and weaknesses in the software itself. He notes how systematic bias can enter when procedures ignore classes of addresses (e.g., new subdivisions or buildings with apartment numbers).

Creating reliable rates from administrative data can be difficult but is often the goal of neighborhood indicators. For example, we may want to know how counts of births by age of mother by neighborhood compare with these counts in other areas. To compare neighborhoods, we need to know the sizes of the appropriate sex (female) and age cohorts for each. The 1990 Census itself can be a source of error, because it sometimes undercounts specific demographic groups. A rate created with unreliable denominators is unreliable, with these effects being especially worrisome for comparisons among neighborhoods of different metropolitan areas. Just as challenging is the need for intercensal estimates of the subpopulations of interest. Private vendors of intercensal data have proved to be more accurate for areas that change little and for larger reporting areas (Chapman 1987). However, often the neighborhoods of intense interest are those in small, poor areas that are changing very rapidly.

A standard demographic rule about the law of large numbers states that the smaller the area, the more volatile and less reliable the data (Sawicki 1989). Using small neighborhoods when analyzing phenomena that are relatively rare (e.g., teen suicide) can produce misleading indicators. In addition, when a phenomenon is concentrated in a subset of the population (teen homicide among African American males, for instance), analysts must take care when making comparisons between neighborhoods of widely differing demographic composition. Using a more refined measure of the population of interest (e.g., the rate of homicides among African American males ages 16–19 versus the rate of homicides among all teenagers ages 16–19) can partially solve that problem. But many small neighborhoods may contain very few people in the target population. Researchers must thus weigh the advantages of gaining data refinement by using smaller neighborhoods against the likelihood of reducing data reliability and validity.

Measuring Causality

Simply monitoring changes in neighborhoods or the people within them can be done with relative ease. If, however, we want to learn *why* an area changed as it did or what contributed to the improvement of a specific household, the challenge is much greater. Garn, Flax, Springer, and Taylor (1976) laid the theoretical groundwork for differentiating the effects of policies on areas and on people. In practice, however, there has been very little progress made toward implementing those ideas in a comprehensive way. Instead, researchers have been working on single facets of this huge puzzle.

Probably the best known small-area research is that of William Julius Wilson (1987, 1992). Wilson asserted that the context provided by inner-city enclaves and the geographic concentration of poverty are themselves factors harming people and families living there. In other words, all things being equal, it is better to be poor and living outside neighborhoods of concentrated poverty than to be poor and living within them. Recently, Galster and Killen (1995) have argued that "Youth make different choices regarding work, welfare, crime, and fertility based on their perceptions of the prospective payoffs of these alternatives"—perceptions that, according to the researchers, are shaped by "local social networks." Galster and Mikelsons (1995) have shown that dimensions of the perceived opportunity structure vary across the neighborhoods they examined and that youth of different races and ethnicities are exposed to remarkably different opportunity structures. The final connection has not yet been made between neighborhood context and the actual impacts it may have on youth's well-being.

The factors that cause improvements or declines in the well-being of neighborhoods as physical entities may be different from those that cause improvements or declines in the well-being of neighborhood residents themselves. (See Coulton 1994 and 1995 for a review of the literature on the effects of neighborhoods on children's well-being.) "Our knowledge of the causes of neighborhood change and the relationship of changes to the health and well-being of different kinds of households, while improving, remains uneven" (Kaplan 1991, 36). Unraveling the factors that

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cause change either in neighborhoods or in their residents' well-being is difficult for many reasons (Hollister and Hill 1995).

First, as already mentioned, people are mobile, and poor neighborhoods house the most mobile populations. Second, the causes of change emanate from the physical, social, and economic environments, as well as from the inhabitants themselves. Third, neighborhoods are to varying degrees the product of self-selection. A constrained selection process sorts inhabitants who share some similar characteristics into the same neighborhoods. Finally, cause and effect are often difficult to distinguish. For example, a neighborhood that has virtually no middle-class residents might be the result of the policies of exclusion in other neighborhoods. Simultaneously, such a neighborhood might be viewed as a potential cause of problems for children (Coulton and Pandey 1992). Vacant and abandoned housing can be both cause and effect, as can crime rates and property tax delinquency. Sorting cause and effect is most likely to be achieved by isolating narrow areas for research and by eschewing large-scale models and indicators of neighborhood and neighborhood resident change. Also critical to understanding cause and effect will be research on geographic mobility and its role in neighborhood and resident change.

Data Availability and Timing

The timing and the availability of geographic data are also problems. Most social and economic data for small areas come from the decennial census. We can acquire data showing changes from the 1970 to 1980 to 1990 censuses for census tracts (and we can aggregate to neighborhoods built around tract geography), but fresh data will not be available until about 2002, when the results of the turn-of-the-century census are released. At the time of this writing, threats of cuts in the Census budget indicate the very real possibility of having no available detailed small-area data in 2002. Thus, we cannot rely on census data to develop spatial or aggregate impact indicators. Though there are other sources of data on population and housing for the intervening years, the smallest geographic units for which most data are available are far larger than the neighborhood. A special tabulation of the American Housing Survey, for example, will report aggregate statistics on The Atlanta Project neighborhoods (roughly 25,000 in population) for 1991 and 1996. However, for a few neighborhoods the samples for most indicators are too small to be reliable. No governmental unit in the Atlanta region conducts its own population and housing survey. We are forced to rely on the administrative records of the social service, education, health, and police agencies. Annual data are available from these records; it takes considerable effort, however, to acquire and process these data, partly because each agency has its own rules governing data confidentiality.[11]

The Interface Between Researchers and Residents

Those of us who have worked in neighborhoods with data and analytical tools have learned that residents can have strong feelings about indicators of deficit that appear to blame the victim and to highlight pathologies. A notable example is the teenage pregnancy or birth rate. Concentrating on such a measure and mapping it can be offensive to those who live in poor neighborhoods. On the other hand, planning for the locations of prenatal caregivers requires that we identify where the client populations in need are likely to reside. This dilemma requires that we manage neighborhood indicators sensitively, using measures of pathology only when they are directly relevant to analyzing alternative action programs.

At the same time that researchers should be sensitive in their use of deficit indicators, they might also benefit from listening to neighborhood residents, who can generate new ideas for useful neighborhood indicators that stretch beyond the available secondary data sources. For example, in The Atlanta Project neighborhoods, residents' complaints about the lack of convenient, affordable, and high-quality groceries led to the creation of a number of indicators of food supply relative to residents, and to pressure on the supermarket chains to open some inner-city stores (Brockwell-Carey 1993). There is a vast potential for sensitive researchers and community-spirited residents to participate in a dialogue to create effective neighborhood indicators.

Local Responsiveness Versus National Comparability

The NNIP plans to assemble a core set of comparable indicators across the seven sites for use in national analysis (data stored at the block group and/or tract level). Such analysis should help bring neighborhood conditions to the attention of federal and state policy-makers, and would produce the only data set with comparable intercensal indicators for researchers interested in cross-neighborhood, longitudinal, and cross-metropolitan areal comparisons. The Project's fundamental emphasis, however, is on promoting effective local use of local data systems.

At the local level, as noted earlier, there will be no attempt to standardize neighborhood delineations.

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The Project team believes that local users should have input into the way neighborhoods are defined, deciding the scale of areal delineation *and* the set of statistical indicators for each domain. Each city will store data at the block group and/or tract scale. The NNIP will then adopt a standard set of indicators for all seven cities. In addition, we expect to support research on what geographic area works best for different purposes. For example, to deal with the effectiveness of community policing we might adopt neighborhoods of 5,000 to 6,000 households in size, and simultaneously adopt a set of indicators of public safety. All seven cities would probably adopt these procedures. Again, modern GIS technology allows us to vary the areal delineation, though comparability of operational definitions across police reporting systems will remain a big challenge.

Conclusion

Historically there have been very few attempts to build neighborhood-level indicators. However, recent developments in desktop geographic information systems, combined with the devolution of social programs to the local level, have created an ability to develop low-cost neighborhood indicators and also a need for them. Five lessons for neighborhood indicators stand out in the history of indicator use. First, it is imperative that the numbers have a specific policy purpose. Too many times in the history of the indicators movement, there have been ambitious attempts at comprehensive data-gathering that have led to indicators that were not used in a policy or programmatic context. Second, geographic indicators play a special role that is potentially more important than that of subject area indicators, because policy gets administered through geographic units and because neighborhoods and cities themselves affect the quality of people's lives. Third, one must be clear from the outset whether the intention is to measure the well-being of neighborhoods or the well-being of people. To do the latter, it is necessary to compile panel data on neighborhood residents. Fourth, to be most useful, indicators must be unbundled, that is, not tied to an overall index. Interestingly, none of the NNIP pilot cities have concentrated on the development of an overall index of neighborhood well-being. Finally, the geographic indicators movement, especially on the neighborhood scale, is in its infancy. Though such indicators are useful for consciousness-raising, they are just beginning to be used to make and evaluate policy, and to search for the causes of change in neighborhoods and in the lives of their residents.

APPENDIX
A Brief History of Social Indicators

Social scientists have long had an interest in enumerating social and economic conditions and have developed sophisticated statistical systems and models that transform raw data into useful indicators. Many of these indicators are tracked regularly. Labor economists, for example, monitor the "misery index," the rates of inflation and unemployment. Macroeconomists follow the Gross Domestic Product (GDP). Human service analysts track the Socio-Economic Status (SES) composite index[12] and the Index of Social Health.[13] The development community follows the United Nations Human Development Index.[14] New measures of economic, social, and environmental well-being are being developed constantly.[15] Such indicators can be central to academic research, community activities, and private and public policymaking.

The United States has been examining data on changing social conditions for many years. One of the first systematic assessments was *The Slums of Baltimore, Chicago, New York, and Philadelphia,* published by the U.S. Bureau of Labor in 1894. The first comprehensive national indicators project was initiated by President Herbert Hoover, who in September 1929 established the President's Research Committee on Social Trends. The primary purpose of this committee was to reveal major social questions through "records," rather than opinions, as a basis for social action. Prior developments in the federal statistical system enabled this Committee to collect a substantial amount of information from existing survey data. The group's final report documented the events and problems that had occurred during the eventful first third of the twentieth century (Research Committee on Social Trends 1933). The primary value of the report was to view the disjointed elements in society as a whole rather than a cluster of parts.

The Hoover report concluded that "knowledge of social trends, such as the Committee has aimed to present, is not a substitute for social action; but such knowledge is an indispensable basis for intelligent action" (xciv–xcv). Such was the case in the 1940s when the government, particularly the Federal Reserve Board and the Council of Economic Advisors (with the support of the academic community), institutionalized sophisticated, periodic benchmarks of the economy like the monthly "Economic Indicators," begun in 1949 to supplement the President's Annual Economic Report. Aggregate-level data were collected, and they continue to inform high-level public and private actions, ranging from the rate of interest charged by the Federal Reserve to prices on Wall Street.

The success in developing uniform and reliable economic indicators prompted the U.S. Department of Health, Education, and Welfare (HEW) to explore the possibility of developing regular and consistent indicators on the social condition in the country.[16] President Johnson recommended to Congress on March 1, 1966 the need for social indicators and a social report. In 1969, HEW released *Toward a Social Report,* which presented indicators that dealt with seven pri-

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mary social issues of concern to citizens and public officials at all levels. (See table 3.) This was a laudable step toward the development of a systematized, national assessment of the nation's well-being. Unfortunately, these efforts were cut short by the presidential transition in 1969.

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NOTES

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2. For a brief review of the social indicators movement, see Appendix A.
3. For more information, contact the California Healthy Cities Project, Health Promotion Section, P.O. Box 942732, Sacramento, CA 94234, (916) 322-6851.
4. The number of Charter Healthy Cities in California grew from 10 in 1991 to 23 in 1994. They are Arcata, Berkeley, Chico, Chino Hills, Chula Vista, Coachella, Duarte, Escondido, Long Beach, Monterey Park, Oakland, Oceanside, Palm Desert, Palm Springs, Pasadena, Pittsburg, Rohnert Park, Roseville, San Francisco, San Ramon, Santa Clarita, South El Monte, and West Hollywood.
5. Other new Healthy Cities projects include Boston, Massachusetts; Detroit, Michigan; Oklahoma City, Oklahoma; and South Bend, Indiana.
6. According to the 1990 Census, 13.1 percent of the U.S. population had incomes below the federal poverty line, and 22 percent of children lived in poverty. The respective total and child poverty rates were 18.7 and 28.3 percent in Boston, 17.1 and 35 percent in Denver, and 23 and 35 percent in Providence.
7. The geographic list moves generally from the smallest (blocks) to the largest geographic areas, with the smaller nesting within the larger. Many city neighborhoods, however, are compatible only with block geography and cannot be nested within or have nested within them any other geographic area; that was the purpose of the User Defined Areas Program of the Census Bureau.
8. The AHS is available for 44 metropolitan areas, currently every five years, with areas on a staggered production schedule. A special tabulation from the Census Bureau cost The Atlanta Project $2,700 to provide summaries for an area of 500,000 divided into 20 subareas. For information, contact William Hartnett at the U.S. Bureau of the Census, at 301-763-8551.
9. These statistics can be reported for a group of named females for a certain time period (e.g., 1988-1993) or can be reported for all females who have ever lived in a specific geographic area in a specific time period (e.g., The Atlanta Project area from 1988 to 1993).
10. The Urban Institute provides 1970, 1980, and 1990 (tract-compatible) tract files for the Census of Population and Housing STF-3 data. See Tobin (1993). Contact Susan Weiner at the Institute at 202-857-8627.
11. Interestingly, privacy issues have not proved terribly serious with the seven NNIP cities. All have developed their own versions of a confidentiality contract that they sign with the data-donor agencies. Under these circumstances, donors appear quite willing to share their data. There have been few exceptions. For example, in Atlanta, H.I.V. patient data were made available only aggregated to zip codes.
12. The SES is a composite index of five equally weighted measures: mother and father's education, family income, father's occupation, and the presence of certain items in the respondents' households.
13. The Index of Social Health, produced by Fordham University's Institute for Innovation in Social Policy since 1986, is a composite index measuring the combined impact of 16 social problems: infant mortality, child abuse, children in poverty, teen suicide, drug abuse, high school drop-outs, unemployment, average weekly earnings, health insurance coverage, poverty among those over 65, out-of-pocket health costs for those over 65, homicides, alcohol-related highway deaths, food stamp coverage, access to affordable housing, and the gap between rich and poor (Miringoff 1994).
14. The Human Development Index is a composite of three human development measures—longevity, knowledge, and income—calculated annually to measure quality of life in 173 countries.
15. See, for example, the forthcoming Genuine Progress Indicator by the San Francisco based research group Redefining Progress, the Calvert-Henderson Quality of Life Indicators by the Calvert Group, Inc., and the System of Integrated Environmental and Economic Accounting (SEEA) by the United Nations.
16. The advancement and high visibility of economic indicators prompted Senator Walter Mondale to sponsor the Full Opportunity and Social Accounting Act of 1967 calling for the establishment of a Council of Social Advisors, the publishing of an annual Social Report, and the creation of a Joint Congressional Committee on the Social Report. Leaders also considered having the Council of Economic Advisors issue an annual Economic and Social Report.

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