Creating Metropolitan and Micropolitan Statistical Areas¹

Michael R. Ratcliffe Population Distribution Branch Population Division U.S. Census Bureau

The Office of Management and Budget's (OMB's) announcement of new "Standards for Defining Metropolitan and Micropolitan Statistical Areas" in December 2000 (OMB, 2000) marked the end of the Metropolitan Area Standards Review Project—the most comprehensive review of the metropolitan area concept and standards since the classification's introduction for the 1950 census. OMB's review benefitted from staff research at the Census Bureau (OMB, 1998; Rain, 1999); research completed under contracts with several universities and consultants (Adams, 1995; Berry, 1995; Morrill, 1995; Frey and Speare, 1995) as well as research carried out independently (Cromartie and Swanson, 1996); and extensive review and recommendations from a federal interagency committee². Changes resulting from the review will become more evident in mid-2003, when OMB plans to announce new metropolitan and micropolitan statistical areas for the decade based on application of the new standards with 2000 census data.

The review focused attention on the underpinnings of the metropolitan area classification, with the relationship between settlement form and function and how to operationalize this relationship forming a central theme within the review. Although the metropolitan and micropolitan statistical area concept still represents an urban center along with the surrounding socially and economically integrated area, the definition of the urban center and the relationship between the core and surrounding territory has changed as settlement patterns and process have changed. The review also took advantage of new theoretical approaches to interpreting and understanding the growth and changing structure of urban and metropolitan areas in the United States. A particular interest of mine is how we create statistical geographical areas to represent patterns and processes evident in the landscape and how these statistical representations then affect our perception and understanding of those same patterns and processes. In this paper, I provide an overview of the review and discuss the conceptual issues raised and addressed during the review of the metropolitan area standards. I focus on the relationship between settlement form and function and how this relationship is represented within the metropolitan and

¹ Paper presented on August 19, 2002 at the American Sociological Association annual meeting, Chicago, Illinois and on November 22, 2002 at the Measuring Rural Diversity Conference, ERS, Washington, DC. This paper reports the results of research and analysis undertaken by Census Bureau staff. It has undergone a more limited review than official Census Bureau publications. This report is released to inform interested parties of research and to encourage discussion. Questions and comments should be addressed to Michael R. Ratcliffe, Population Division, U.S. Census Bureau, Washington, DC 20233 USA or by e-mail at michael.r.ratcliffe@census.gov.

² The Metropolitan Area Standards Review Committee included representatives from the Bureau of the Census (chair), Bureau of Economic Analysis, Bureau of Labor Statistics, Bureau of Transportation Statistics, Economic Research Service, National Center for Health Statistics, and, *ex officio*, OMB. The Census Bureau provided conceptual and technical advice and research support to the review committee.

micropolitan statistical area classification. The paper concludes with some thoughts on how the use of metropolitan and micropolitan statistical areas in analysis, policy development and program implementation affects our understanding of what these areas represent.

Before discussing these themes, however, some background is necessary about the metropolitan area program and the review of the standards.

Background and Concept

The Metropolitan Area Program has provided standard statistical definitions for 50 years. In the 1940s, it became clear that the value of metropolitan data produced by federal agencies would be enhanced if agencies used a single set of geographic definitions for the nation's largest centers of population and activity (Klove, 1952). Prior to that time, federal agencies defined a variety of statistical geographic areas at the metropolitan level (including "metropolitan districts," "industrial areas," "labor market areas," and "metropolitan counties") using different criteria applied to different geographic units. The differences in methodology and definitions for metropolitan-level entities meant that one agency's statistics were not directly comparable with those of another agency for any given area. The Bureau of the Budget (OMB's predecessor) led the effort to develop what were then called "standard metropolitan areas" in time for their use in the 1950 census reports. Since then, comparable data products for metropolitan areas have been available.

From the beginning of the Metropolitan Area Program, OMB reviewed and, if warranted, revised the metropolitan area standards prior to their application to new decennial census data. Periodic review of the standards ensures their continued relevance in describing patterns of social and economic interaction and also ensures that the definition process utilizes the best possible data, procedures, and methodologies. Periodic review of the standards also focuses fresh attention on the relationship between the metropolitan area concept and the operational process of applying data to define areas that embody that concept. The review addressed, as a first priority, user concerns with the conceptual and operational complexity of the standards as they have evolved over the decades in response to data users' expectations, changes in settlement patterns, and our understanding of how best to represent statistically the concept of a metropolitan-level functional area.

The general concept of a metropolitan statistical area and a micropolitan statistical area is that of an area containing a significant population nucleus and adjacent communities that have a high degree of integration with that nucleus. This general concept has remained essentially the same since metropolitan areas were first defined before the 1950 census. The purpose of metropolitan areas (and now by extension micropolitan statistical areas) also is unchanged from when they were first defined: the classification provides a nationally consistent set of definitions for collecting, tabulating, and publishing federal statistics. To this end, the metropolitan area concept has been successful as a statistical representation of the social and economic linkages between urban cores and outlying integrated areas. This success is evident in the continued use and application of metropolitan area definitions across broad areas of data collection, presentation, and analysis. This success also is evident in the use of statistics for metropolitan areas to inform the debate and development of public policies and in the use of metropolitan area definitions to implement and administer a variety of nonstatistical federal programs. These nonstatistical uses, however, raise concerns about the distinction between appropriate uses—collecting, tabulating, and publishing statistics as well as informing policy—and inappropriate uses—implementing nonstatistical programs and determining program eligibility. OMB establishes and maintains these areas solely for statistical purposes.

Although the metropolitan and micropolitan statistical area concept continues to represent a socially and economically integrated area, how we measure integration has changed as data sources and the technology for manipulating data have evolved and improved and as the relationship between settlement form and function also has changed. Prior to 1950, the Census Bureau defined metropolitan districts using population density for county subdivisions partly because data describing functional interactions did not exist, but also because settlement form and function were closely intertwined. The population density threshold used to qualify outlying county subdivisions took into account the relatively higher densities found in railroad and streetcar suburbs, offset slightly by the lower densities of surrounding rural areas within the same geographic entity. For standard metropolitan areas defined before the 1950 census, functional integration was measured in terms of telephone call patterns. With the introduction of the place-of-work question on the 1960 census long form, daily commuting patterns replaced telephone call patterns as a measure of social and economic linkages between central counties and potential outlying counties.

The 1990 and earlier standards required the use of other, structural measures—measures of "metropolitan character"—in addition to commuting for determining the qualification of outlying counties and thus the geographic extent of a metropolitan area. Potential outlying counties had to satisfy these additional measures, which included specified levels of population density and percentage of the population in urban settlements, to qualify for inclusion in a metropolitan area, regardless of the intensity of the journey-to-work patterns. Whether the combination of functional and structural measures was still appropriate was a central issue in the recent review of the standards. Census Bureau staff and the review committee reached the conclusion that the relationship between the metropolitan character measures and social and economic linkages had become less meaningful over time in the United States. OMB supported this conclusion, and the structural measures of metropolitan character have no role in outlying county qualification in the 2000 standards.

The metropolitan and micropolitan statistical area concept continues to rely on the notion of functional integration in determining geographic extent and commuting provides the measure of those functional ties. Three priorities guided OMB's decision to continue using commuting data as a measure of integration between adjacent areas. Data used to measure functional connections should describe those connections in a straightforward and intuitive manner, be collected using consistent procedures nationwide, and be readily

available to the public. These priorities pointed to the use of data gathered by federal agencies and, more particularly, to commuting data from the Census Bureau. The percentage of a county's employed residents who commute to the central county or counties is an unambiguous, clear measure of whether a potential outlying county should qualify for inclusion. The percentage of employment in the potential outlying county accounted for by workers who reside in the central county or counties is similarly a straightforward measure of ties.

The review considered functional integration measures other than commuting, focusing in particular on whether new or improved data sets that could meet definition needs had become available from other agencies or the private sector. Census Bureau staff investigated the feasibility of using commodity flow data collected through the Commodity Flow Survey conducted by the Census Bureau on behalf of the Bureau of Transportation Statistics. We were interested in the potential use of these data as a measure of economic linkages between areas with low levels of inter-county commuting, particularly as a means of extending the functional area concept in nonmetropolitan portions of the country. Although testing yielded promising results when applied to data for Kansas and Nebraska, the small size of the survey (200,000 establishments in 1992 and 100,000 establishments in 1997) limits the reliability of the data for nationwide analysis. The small sample size also raises disclosure concerns that limit the public release of information at levels of geography that are relevant building blocks for defining metropolitan and micropolitan areas.

We also considered the potential use of data describing shopping and recreational activity patterns in addition to journey-to-work patterns. Some commenters, recognizing that social and economic linkages now take place on the "information superhighway" in addition to traditional transportation and communication networks, suggested internet usage patterns for determining the extent of areas. A solid body of research about the relationships between telecommunications networks, internet usage, and urban form and function was lacking at the time of the review, though there are indications that this situation is changing (*e.g.*, Moss and Townsend, 1998; Wheeler *et al.*, 2000; Walcott and Wheeler, 2001). Such information, as well as other data sets pertaining to daily and weekly activity patterns of households and media penetration, would result in a more comprehensive definition of interactions between central and outlying counties, but currently there are no nationally consistent data sets for any of these variables that also are easily accessible to all data users.

Decennial census place-of-work and commuting data stood out, then, as a consistently collected, publicly available source of information about daily interaction that could be manipulated and reviewed easily by a wide variety of data users. We used decennial census data in developing and testing alternative approaches to defining a variety of functional statistical areas. Place-of-work data were used in several ways:

1) To assess patterns and levels of commuting to, from, and in the direction of particular entities, particularly as a means of testing and determining the effect of different thresholds on the extent of metropolitan and micropolitan area definitions. For

instance, we reviewed patterns of commuting between outlying census tracts and tract-based urban cores; tract-based urban cores and outlying counties; central counties and outlying counties; and commuting between pairs of counties.

- 2) To assess levels of employment within individual places and counties, in particular what share of employed residents actually worked in their place or county of residence and what share commuted to other entities for work. The number of persons employed within a particular place as well as the ratio of persons working to number of employed residents within a place (referred to as the "employment/residence ratio") were both instructive when developing principal city criteria. The employment/residence ratio also was used in developing criteria for subdividing the largest metropolitan statistical areas to form smaller groupings of counties (metropolitan divisions) based around counties containing substantial employment nodes.
- 3) To compare levels and patterns of inter-county commuting from one census to another to reach a better understanding of how the relationship between communities, as measured by commuting, has changed over time.

Form and Function in Statistical Area Definitions

Metropolitan areas and their predecessor metropolitan districts traditionally have represented areas of social and economic influence extending beyond city limits. The conceptual and methodological basis underlying the 2000 standards continues to take into account the observation that metropolitan and micropolitan areas have both form and function. That methodology uses such variables as population size and density to measure the form, or the structural component, of the centers-that is, what we see on the landscape. Settlement form identifies the Census Bureau's urban areas—urbanized areas of 50,000 or more population and urban clusters of at least 2,500 up to 50,000 persons. The functional component—interactions of people and activities among places as measured by commuting flows-is key to determination of the centers' daily reach. Throughout the review of the standards, substantial agreement existed that population density and daily commuting continue to be the best, nationally consistent means for identifying urban cores and the areas linked with those cores. At the same time, however, many observers concur that both the structural and functional components of cities and their surroundings have changed significantly since metropolitan areas were first defined (Adams, 1995; Berry, 1995; Dear and Flusty, 1998; Adams et al., 1999).

Metropolitan and micropolitan statistical areas are representations of the process of urbanization, which after Harvey (1989) I characterize here as the "flow of capital across space." In this conceptualization, "urbanization" is both a pattern and a process. The social and economic processes embodied in the metropolitan and micropolitan statistical area classification are evident in the built environment—the buildings, houses, roads and other cultural phenomena and spaces that represent the structural component, or pattern, of urbanization. These processes also are evident in the functional interactions between urban cores and outlying communities. The metropolitan and micropolitan landscape

may be settled at a variety of densities, may be urban, suburban, exurban, or quite rural, in fact, but regardless of settlement pattern, it is associated with one or more urban centers. How to measure and account for both the structural and functional elements in the urbanization process was central to the review of the standards.

Urban patterns can be seen and therefore more easily defined in a straightforward and objective manner using mutually agreed upon criteria and data sources. The structural aspect of the urbanization process is represented statistically by the Census Bureau's urban areas, which are based on population density measured at the census block and block group levels. The urbanization process, being less visible and more fluid, does not lend itself as easily to operationalization, particularly when defining mutually exclusive nodal regions. Connectivity between individuals and places is always a more elusive construct than patterns of development and population distribution and can be measured (as least theoretically) using a variety of criteria and data applied at different levels of geography. The functional aspect of the urbanization process is manifested in the less tangible (but more or less observable statistically) flows of people, goods and services, ideas, and other cultural phenomena streaming into, out of, and around the core of a metropolitan or micropolitan statistical area. The extent of a metropolitan or micropolitan statistical area reflects the field of influence surrounding an urban core, but it does not imply that the entire area is urban in a structural sense. Instead, these are in a sense, "daily urban influence areas" in which urban, suburban, and rural areas are associated with an urban center (or centers) through a set of functional relationships as measured and demonstrated by journey-to-work patterns.

How to retain the nodal aspect of the metropolitan area concept while de-emphasizing the role of individual places featured prominently in our review of the standards. For the 1950 census, a city of 50,000 or more residents was necessary for designation of a metropolitan area. Over time, it became possible also to designate a metropolitan area on the basis of "twin cities" totaling 50,000 or more population and, eventually, designation came to be based on the presence of either a city or an urbanized area of 50,000 or more population. The single central city of 50,000 or more persons retained conceptual primacy, however, since designation on the basis of an urbanized area required in addition that the entire area have a total population of at least 100,000.

Observable changes in the urban landscape of the United States suggest that individual places are becoming less important than the network structure itself, and places become nodes in a complex system of social and economic linkages created and organized under constantly shifting economic and political circumstances. These developments point to the growing interdependence of places in general and some blurring of individual place identities, underscoring the need to identify metropolitan and micropolitan statistical areas as a means of describing socially and economically integrated regions. The changing balance of network and node indicated by the continuing decentralization of population and urban functions away from historical central cities in the United States suggests that individual central cities of 50,000 or more population are no longer appropriate starting points for identifying functional areas. Instead, urban cores, comprising both the historical central city as well as other economic centers that have

developed in the inner and outer suburbs, are the organizing entities that dominate and influence their surrounding regions.

Urban Cores and Central Counties

Urbanized areas and urban clusters with at least 10,000 population will form the cores of metropolitan and micropolitan statistical areas, respectively. In turn, the locations of urbanized areas and urban clusters will be used to identify the "central counties" of metropolitan and micropolitan statistical areas—the counties to and from which commuting patterns will be measured to determine the extent of metropolitan and micropolitan statistical areas.

Analysis of place-of-work data at the census tract level increased our understanding of functional relationships within and across urban area boundaries and also demonstrated the importance of the urban core as the organizing entity within a metropolitan or micropolitan area. For instance, a question early in the review was whether to continue to measure commuting to and from central counties or take advantage of new data tabulations and data handling technologies to measure commuting to and from urban cores. Measuring commuting into and out of a census tract-based urban core would better represent the interaction between that core and the surrounding territory, even when the basic building blocks for metropolitan and micropolitan areas are counties. Our review of commuting patterns, however, found that the level of commuting directly into the census tract-based urban core differed little from the level of commuting into the urban core expressed in terms of central counties. This finding suggested that a county-to-county approach to measuring commuting would adequately depict the core-based nature of commuting while avoiding potential inaccuracies due to allocation of place of work responses when detailed locational information is not provided.

The issue of whether to categorize a metropolitan or micropolitan statistical area based on the population of the most populous (or "dominant") core or on the total population of all (or "multiple") cores within it received considerable attention throughout the review. In the end, we concluded that a single core of 50,000 or more population provides a wider variety of functions and services than does a group of smaller cores, even when such a group may have a collective population greater than 50,000. A single core of at least 50,000 population, therefore, is required for metropolitan statistical area qualification. The available literature on urban form and function supports this decision, though such research has tended to focus on individual cities rather than urban agglomerations. The lack of scholarship focusing on the social and economic influence of urban agglomerations was frustrating and meant that we had to draw inferences from the existing body of work (e.g., Esparza and Krmenec, 1996). Subsequent reviews of the standards will need to reconsider this issue as urban forms and structures continue to evolve in the United States. We encourage and welcome scholarship that focuses on the social and economic influences of urban agglomerations rather than simply those of individual cities.

Functional Integration and Outlying County Qualification

The selection of daily commuting as the measure of interaction between communities satisfied only one aspect of the process in defining the extent of metropolitan and micropolitan statistical areas. Selection of a specific threshold for qualification was a necessary task that required conceptualizing a particular minimum level of commuting as signifying when ties between pairs of communities have become socially meaningful. Varying levels of commuting exist between communities throughout the United States, and many counties that do not meet the specified level of commuting for inclusion in a metropolitan or micropolitan statistical area still exhibit low levels of commuting interaction with the central counties of metropolitan and micropolitan and micropolitan statistical areas is not the existence of commuting ties, but the existence of commuting ties at levels that indicate socially and economically meaningful relationships.

But what threshold is meaningful? From 1960 through the 1990 standards, 15 percent was the minimum commuting threshold used in determining qualification of outlying counties, although it must be noted that only counties with specified population densities or urban settlement could qualify for inclusion in a metropolitan area with such a small level of commuting. That is, in previous standards, a particular commuting rate was meaningful only when in combination with a particular level of population density or urbanization (see the discussion of "metropolitan character" below). For the 2000 standards, 25 percent is the minimum threshold for outlying county qualification regardless of other measures. Pisarski (1996) notes that changes in daily mobility patterns and increased interaction between communities are indicated by increases in intercounty commuting over the past 40 years. The percentage of workers in the United States who commute to places of work outside their counties of residence increased from approximately 15 percent in 1960 to nearly 25 percent in 1990. Raising the minimum commuting percentage required for qualification of outlying counties from 15 percent to 25 percent is appropriate against this background of increased overall inter-county commuting. In other words, since out-of-county commuting has become more commonplace, a higher percentage of commuting is necessary to demonstrate ties comparable to those indicated by a lower commuting rate in 1960.

We also considered the "multiplier effect" that commuters would have on the economies of the counties in which they live. The size of the multiplier effect varies depending on the size of a region's economy and the employment base, but a review of the literature indicated that a multiplier of two or three generally is accepted for most areas. Applying a multiplier of two or three with the 25 percent minimum commuting requirement means that the incomes of at least half of the workers residing in the qualifying outlying county are connected either directly (through commuting to jobs located in the central county) or indirectly (by providing services to local residents whose jobs are in the central county) to the economy of the central county or counties of the metropolitan or micropolitan statistical area.

Metropolitan Character

Since standard metropolitan areas were first defined in 1949, counties had to exhibit, in addition to integration, other attributes referred to collectively as "metropolitan character" to qualify as outlying. In practice, this meant an emphasis primarily on population density as one aspect of what makes an outlying county "metropolitan." In 1949, settlement form was still intertwined closely with function. Areas having high population densities also were those that were linked closely with urban centers. Improved transportation and communications networks have reduced the cost of distance and have contributed to a wider dispersion of settlement and increased interaction across those spaces. Population density no longer correlates with differences in industry, occupation, family structure, and other variables to the extent that it did 30 to 50 years ago. It is more difficult to argue today that sparsely settled areas must meet different criteria of integration with central cores than areas with higher population densities. As a result, measures of metropolitan character have been eliminated from the metropolitan and micropolitan statistical area standards.

The Uses of Metropolitan and Micropolitan Statistical Areas as Containers of Data

"[S]patial structures structure not only the group's representation of the world but the group itself, which orders itself in accordance with this representation" (Bourdieu, 1977; in Harvey, 1990).

Concerns about the use of metropolitan and micropolitan statistical areas in nonstatistical programs and the potential effects of the new standards drew considerable attention and comment during the review. While we did not take nonstatistical uses into consideration when developing metropolitan and micropolitan statistical area standards, we did recognize that these areas are and will be used for program participation and policy implementation. We also recognized that such uses affect users' understanding of the metropolitan and micropolitan area concept, the interpretation of data, and, possibly, the urbanization processes embodied by the classification.

I have noted that metropolitan and micropolitan statistical areas are representations of social and economic relationships defined for purposes of collecting, tabulating, and publishing statistical data. As such, metropolitan and micropolitan statistical areas reflect a concept of space as a container for phenomena and activity. We know also that metropolitan areas are used to analyze demographic and economic patterns for the purpose of informing and at times establishing and implementing programs and policies. But, how much consideration do we give to the meaning and implications of these uses? How often do we view a metropolitan area as neatly encompassing a particular phenomenon or activity under study and treat a demographic or economic process as if it occurs only within the finite confines of statistical space? A potential problem with treating space in this way is that the container takes on an independent existence, viewed as "a structure that we can use to pigeon-hole or individuate phenomena" (Harvey, 1973), often without giving any (or at least much) thought to the suitability or meaning of the container.

With any geographic area classification there also is a tendency to assume that the urban core with which the area is associated influences the entirety of the area. We know intuitively that this is not necessarily the case, particularly as one reaches the boundary between metropolitan and nonmetropolitan territory or between two metropolitan areas. Yet, we often conduct analysis and implement policy as if social and economic flows extend up to and stop at the geographic area boundaries. There is danger in viewing a metropolitan or micropolitan statistical area as a closed system of interactions and that the boundaries of outlying territory are inviolable walls where the influence of one area stops and that of another begins. If metropolitan areas were portrayed as overlapping entities, rather than as mutually exclusive areas, we could more easily highlight the complex and fluid nature of social and economic linkages, especially for communities located on the fringes of individual metropolitan areas.

Given the use of metropolitan and micropolitan statistical areas as containers for data, the geographic building block selected for use in defining these areas has important implications. The ability of federal statistical agencies and others to collect and present data for the components of metropolitan and micropolitan statistical areas is critical. The use of counties as the building blocks for defining metropolitan and micropolitan statistical areas serves the classification's purpose of providing nationally consistent areas for collecting, tabulating, and publishing a wide range of demographic and economic data. The use of sub-county units, like county subdivisions or census tracts, however, would yield a definition with greater spatial resolution, and the technological capability to use such units would free us to create a variety of statistical spaces within which to portray and analyze social and economic interactions. The division of a county between two or more functional areas might also portray more accurately the competition between core areas over spheres of influence. Indeed, the review demonstrated that other geographic building blocks can be used to define functional areas with greater spatial resolution (OMB, 1998; Morrill et al., 1999; Rain, 1999). For instance, the Economic Research Service's Rural-Urban Commuting Area (RUCA) classification identifies nodal functional regions using census tracts as building blocks for identifying central cores and qualifying outlying census tracts (Morrill et al., 1999).

When metropolitan area designations are used for programmatic or policy oriented purposes, reality sometimes is made to conform to a representation with little thought given to the effect on space, populations, and program participants. Programs that base funding levels or eligibility on whether a county is included in a metropolitan or micropolitan statistical area may not accurately address issues or problems faced by local populations, organizations, institutions, or governmental units. For instance, programs that seek to strengthen rural economies by focusing solely on counties located outside metropolitan statistical area because a high percentage of the county's residents commute to urban centers to work. Although the inclusion of such a county in a metropolitan statistical area indicates the existence of economic ties with the central counties of that metropolitan statistical area, it may also indicate a need to provide programs that would strengthen the county's rural economy so that workers are not compelled to leave the county in search of jobs. The U.S. Department of Health and Human Services (DHHS) recognizes the overlapping influences that multiple metropolitan cores can have on certain nonmetropolitan counties and treats them as if they were metropolitan for hospital funding and reimbursement programs. These counties (known as "Lugar Counties," after Senator Lugar who sponsored the enabling legislation) are sufficiently influenced by multiple metropolitan cores that they do not meet the specified level of commuting to a single metropolitan area, but do qualify for the DHHS programs when commuting to all adjacent metropolitan central counties is considered. The important point to consider about the identification of such counties is that it recognizes that, for certain programs and policies, it makes sense to modify or extend our perception of what is "metropolitan" rather than trying to fit a "one-size-fits-all" view of functional relationships on all programs.

Recent calls to use metropolitan areas as the spatial unit in which to develop regional governments provide good examples of the way in which a statistical representation of urbanization is used to structure organizations charged with developing and implementing policies that affect the process of urbanization. Rusk (1996, 1998), Orfield (1997) and others envision the development of metropolitan area-wide governments that have the power to direct housing, transportation, economic development, and zoning policy as a means of redressing social and economic problems found within the central city and suburban zones of metropolitan areas. In a sense, these proposals merely formalize and strengthen the existing roles of metropolitan planning organizations and regional planning organizations. These proposals to form regional governments on the basis of metropolitan area definitions, though not always consistent with official metropolitan area definitions, complete the circle of programmatic uses, with society being structured on the basis of the structure it has created to define and portray reality.

Concluding Thoughts

When we take the statistical representation of the urbanization process and then use it to implement policy, do we create conditions that lead to the recreation of the urban pattern across the territory affected by the urbanization process? When we treat all metropolitan territory as if it was "urban," then prevent application of programs designed to maintain and bolster the rural landscape and economy, will the result be further extension of an urban landscape? To what extent do we foster changes in the settlement pattern when we analyze and develop programs as if "metropolitan" was synonymous with "urban?" As we define and use metropolitan and micropolitan statistical areas, we need to be cognizant that these statistical representations of the urbanization process also form the structure within which we make decisions about the way in which the urbanization process will unfold and develop. The relationship between the classification as a statistical representation of the urbanization process and the nonstatistical program and policy oriented uses of the classification has produced tension over the years. One positive outcome of the recent review, however, was the attention given to this relationship between statistical and nonstatistical uses and OMB's positive comments on a need to develop geographic classifications oriented specifically toward program and policy implementation (OMB, 2000).

OMB's new standards offer an approach to defining metropolitan and micropolitan statistical areas that is both easy to understand and implement and conceptually consistent. The new standards make use of publicly available data to define a set of functional areas and apply those data to geographic units that are defined consistently nationwide and for which a wide variety of statistical data are available. The challenge for us as we use these new metropolitan and micropolitan statistical areas is to recognize that statistical geographic areas are fluid and in large part reflections of current perceptions of patterns and processes playing out across the landscape. The new "Standards for Defining Metropolitan and Micropolitan Statistical Areas" represent an important stage in an ongoing effort to meet these challenges and create conceptually and statistically meaningful geographic areas within which to understand and describe contemporary social and economic processes.

Sources cited:

- Adams, John S. 1995. "Classifying Settled Areas of the United States: Conceptual Issues and Proposals for New Approaches," in Dahmann and Fitzsimmons, eds., *Metropolitan and Nonmetropolitan Areas: New Approaches to Geographical Definition*, Population Division Working Paper 12, Washington: U.S. Census Bureau.
- Adams, John S., Van Drasek, Barbara, and Phillips, Eric. 1999. "Metropolitan Area Definition in the United States," *Urban Geography*, 20 (8): 695-726.
- Berry, Brian J.L. 1995. "Capturing Evolving Realities: Statistical Areas for the American Future," in Dahmann and Fitzsimmons, eds., *Metropolitan and Nonmetropolitan Areas: New Approaches to Geographical Definition*, Population Division Working Paper 12, Washington: U.S. Census Bureau.
- Bourdieu, P. 1977. Outline of a Theory of Practice. Cambridge, UK.
- Cromartie, John B. and Swanson, Linda L. 1996. "Census Tracts More Precisely Define Rural Populations and Areas," *Rural Development Perspectives*, 11 (3).
- Dear, Michael and Flusty, Steven. 1998. "Postmodern Urbanism," Annals of the Association of American Geographers, 88 (1): 50-72.
- Esparza, Adrian X. and Krmenec, Andrew J. 1996. "The Spatial Markets of Cities Organized in a Hierarchical System," *Professional Geographer*, 48 (4): 367-378.
- Frey, William H. and Speare, Alden. 1995. "Metropolitan Areas as Functional Communities," in Dahmann and Fitzsimmons, eds., *Metropolitan and Nonmetropolitan Areas: New Approaches to Geographical Definition*, Population Division Working Paper 12, Washington: U.S. Census Bureau.

Harvey, David. 1973. Social Justice and the City. Cambridge, MA: Blackwell.

- . 1989. The Urban Experience. Baltimore: The Johns Hopkins University Press.
- _____. 1990. The Condition of Postmodernity. Cambridge, MA: Blackwell.
- Klove, Robert C. 1952. "The Definition of Standard Metropolitan Areas," *Economic Geography*, 28 (2): 95-104.
- Morrill, Richard. 1995. "Metropolitan Concepts and Statistics Report," in Dahmann and Fitzsimmons, eds., *Metropolitan and Nonmetropolitan Areas: New Approaches to Geographical Definition*, Population Division Working Paper 12, Washington: U.S. Census Bureau.
- Morrill, Richard, Cromartie, John, and Hart, Gary. 1999. "Metropolitan, Urban, and Rural Commuting Areas: Toward a Better Depiction of the United States Settlement System," *Urban Geography*, 20 (8): 727-748.
- Moss, Mitchell L. and Townsend, Anthony M. "Spatial Analysis of the Internet in U.S. Cities and States," paper prepared for the Technological Futures Urban Futures Conference, Durham, England, April 23-25, 1998. http://urban.nyu.edu/research/spatial-analysis/spatial-analysis.pdf (January 2002).
- Office of Management and Budget. 1998. "Alternative Approaches to Defining Metropolitan and Nonmetropolitan Areas," *Federal Register*, 63 (244): 70526-70561. . 2000. "Standards for Defining Metropolitan and Micropolitan Statistical Areas," *Federal Register*, 65 (249): 82228-82238.
- Orfield, Myron. 1997. Metropolitics. Washington, DC: Brookings Institution.
- Pisarski, Alan. 1996. *Commuting in America II*. Lansdowne, Virginia: Eno Transportation Foundation, Inc.
- Rain, David R. 1999. "Commuting Directionality, a Functional Measure for Metropolitan and Nonmetropolitan Area Standards," *Urban Geography*, 20 (8): 749-767.
- Rusk, David. 1996. *Baltimore Unbound: A Strategy for Regional Renewal*. Baltimore: The Abell Foundation.
- . 1998. "The Exploding Metropolis," *Brookings Review*. Fall 1998: 13-15.
- Walcott, Susan M. and Wheeler, James O. 2001. "Atlanta in the Telecommunications Age: The Fiber-Optic Information Network," *Urban Geography*, 22 (4): 316-339.
- Wheeler, James O., Aoyama, Yuko, and Warf, Barney, eds. 2000. *Cities in the Telecommunications Age: The Fracturing of Geographies*. New York: Routledge.