

Appreciating Density

Population density has been identified by many analysts as a key indicator of the efficiency and sustainability of human development patterns.

Developments at higher densities reduce the amount of land removed from other uses, preserve open space, and maintain options for future land use patterns. Much empirical work has been done on the distribution of population by density level and on the characteristics of settlements with differing population densities. The Lincoln Institute continues to contribute to this topic through both recently completed and ongoing work.

Many studies of population density focus on the municipal and metropolitan scale, contrasting low-density, auto-oriented development with higher-density development alternatives. While there is much numerical analysis of density, one challenge is the lack of systematic information about the physical appearance of developments at different densities.

A new Lincoln Institute book, *Visualizing Density* by Julie Campoli and Alex S. MacLean, addresses this issue. It presents more than 1,000 aerial photographs of residential development across the United States along with site diagrams and street patterns. Organized by level of density (in units per acre), this visual catalog can enable designers, planners, students, and citizens to immediately contrast and compare alternative designs at the same or different density levels. A major theme and message of the book is that design quality has a profound effect on the appearance of residential development across all density ranges.

In a recent working paper, "Does Urban Design Influence Property Values in High-Poverty Urban Neighborhoods?" Brent Ryan and Rachel Weber demonstrate that design quality also is valued in the marketplace. Their research analyzes the determinants of market values of new residential developments in low-income neighborhoods in Chicago. They find that developments that are carefully integrated into surrounding neighborhoods have higher values than developments that are separated from the existing street grid by gates and entryways.



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Ongoing work at the Institute is also examining density and the distribution of population at the national and state level in the United States. At the national level, an analysis using census data by state on population and area reveals that the distribution of state populations across the contiguous 48 states became progressively more uniform from 1900 through the 2000 census. This holds even as more people have moved closer to the coasts.

At the state level, county data on population and area for each state show that the distribution of county populations within states became more uniform for only 13 out of 48 states from 1980 to 2000, and for 20 of 48 states from 1990 to 2000. States with increasingly uniform distributions of population across counties include those in New England and the mid-Atlantic region, Florida, and California. States whose population became much more concentrated within particular counties are predominantly Midwestern states that have experienced large declines in rural populations.

In 2000, states with the most concentrated population distributions at the county level were Utah and Nevada, with large sparsely populated areas and growth concentrated around a few large cities. Those states with the most uniform population distributions were Vermont and Connecticut, both of which lack large cities. These results indicate that in many states major metropolitan growth has not yet crossed county boundaries to a great extent.

At the metropolitan scale, the Lincoln Institute will analyze changes in the distribution of population over time as part of an evaluation of smart growth policies that will focus on eight states with widely varying growth management policies. This evaluation will also examine the effects of smart growth policies on related areas including transport, public finance, environment, housing, and institutional capacity. All of these efforts will further illuminate the curious dynamics of density and dispersal in human settlements.

For more information on the two published works, visit the Lincoln Institute Web site (www.lincolninst.edu). 