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### Author

Talen, Emily

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# SmartCode Justice

Emily Talen

Over the past century, one of the greatest disappointments of American city planning has been its complicit role in fostering the physical separation of people according to social criteria. This has been the unfortunate consequence of planning's various regulatory tools, notably zoning. As Michael Sorkin has written, city planning has largely been devoted to creating an "armature" of "conflict avoidance."<sup>1</sup>

City planning did not start out this way. Paradoxically, the twentieth century began with demands by urban reformers that something be done about the "monotony" of the slums. Thus, while early planning proposals—such as the Garden Cities of Ebenezer Howard—were designed to provide relief from the ills of the city, they continued to emphasize the interconnectedness of urban life. Even zoning was at first a mechanism of diversity, as planners like Josef Stubben proposed classifications that would integrate multiple uses in a coherent way.<sup>2</sup>

Some time during the 1920s, egged on by a public eager to protect property values, however, planners made a wrong turn. As they struggled for recognition and legitimacy, they began to think of their fledgling profession in terms of single components—parks, streets, highways. Being scientific and efficient meant simplifying, and simplifying meant differentiating. One early practitioner, Harland Bartholomew, even described planning as "a divide and conquer system," whereby the city could be separated into components for easier analysis, planning, and hopefully, manipulation.<sup>3</sup>

Unfortunately, this meant separation by race and class, too. By the time of the landmark 1926 U.S. Supreme Court zoning case, *Village of Euclid vs. Ambler Realty Co.*, the segregationist orientation of leading planners was firmly established. The court merely legalized it. Writing for the majority, Justice Sutherland stated: "the apartment house is a mere parasite, constructed in order to take advantage of the open spaces and attractive surroundings created by the residential character of the district. Moreover, the coming of one apartment house [brings] disturbing noises...depriving children of the privilege of quiet and open spaces for play, enjoyed by those in more favored localities."

The Euclid decision was lauded by planners because it allowed them to discriminate between housing types in the design of new residential areas. By 1935, Thomas Adams, a leading planner, was proposing four classes of residential zones in the hope of reducing the "injury" that one housing type could cause another.<sup>4</sup> The upshot of such ideas was a system of zoning that protected property values but effectuated profound social inequities.

Today many planners interested in a more socially just development pattern believe it is necessary to reverse this history in any way possible. But will alternative systems of land use regulation bring a better outcome? As new regulatory approaches gain prominence, how can planners be sure they will reverse past forms of segregation?

Of the present alternative frameworks, the SmartCode represents a particularly strong departure from conventional land use regulation schemes. Based on the notion of a rural-urban transect, it proposes a series of six increasingly dense zones of settlement (labeled T1 to T6), from natural areas to the central city. Within each zone, building is regulated less by restrictions on use than desired attributes of form and type.

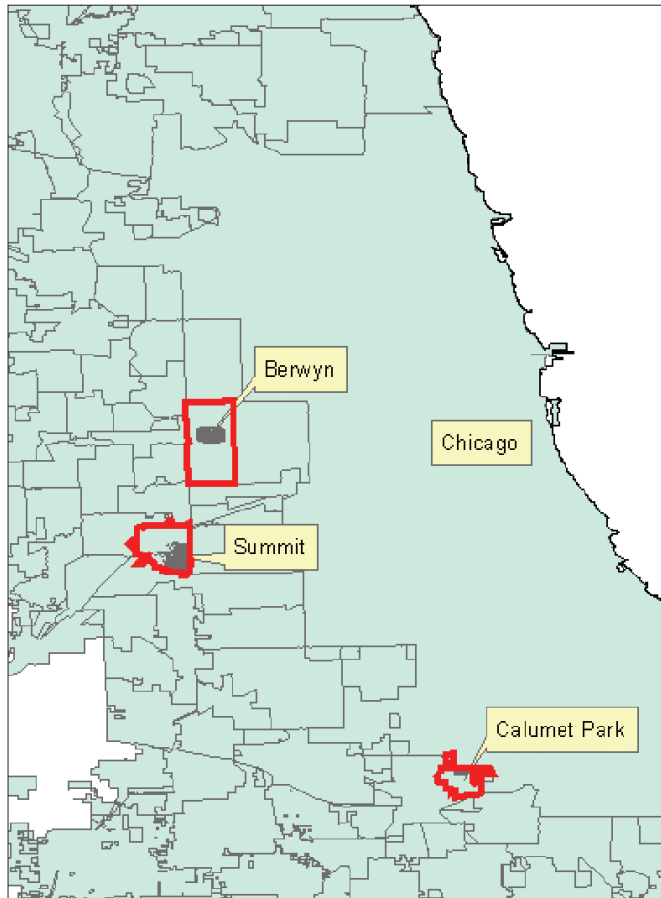
Can the SmartCode be evaluated in terms of its ability to foster social diversity? Can its intent to regulate according to a "collection of qualities appropriate to a zone" really protect against the further breeding of social homogeneity? As the history of American land-use zoning indicates, it is unlikely its effects will be neutral.

## Planning for Diversity

To begin to address these questions it is important to define social diversity broadly—in terms of race/ethnicity, income, and stage in the life cycle. But what planning characteristics would be most likely to support such diversity? Surely, the relationship is complex: just as social and economic divisions may be both fortified by spatial conditions, so too might spatial conditions encourage social and economic diversity.<sup>5</sup> I propose four specific measures by which the design of the physical environment is likely to better support social diversity. An area (such as a neighborhood) might be considered diverse if it contains a mix of people according to these criteria.

*Housing Mix.* Creating a mix of housing units is the most basic approach to building diversity. Such a mix was an explicit goal of nineteenth-century social reformers. Early Garden City plans also integrated different types of housing within the same block as a way of encouraging a mix of people of various backgrounds. In those early designs, strategies often focused on disguising differences between housing types—for example, by making apartment buildings look like large single-family homes.

Today, mixing housing types may be a matter of reversing the rules by which social segregation has been achieved—allowing multifamily units where they have been excluded, and eliminating codes that have had the effect of putting a cap on density and infill (for example, minimum lot size and setback requirements). Putting



larger or more expensive housing in lower-income areas through replacement or restoration is a reverse strategy that may achieve the same effect.

*Neighborhood Facilities and Services.* Social diversity requires the support of a well-served neighborhood. Not only do neighborhood facilities serve the needs of residents, but neighborhood-level services can be thought of as places of shared space, with the ability to foster social connectedness. Collective ownership of facilities and services at the local level makes the neighborhood more stable, providing a better chance for informal, voluntary control. Sociologists who study “stable diverse” neighborhoods have found they contain two common denominators: economic diversity and a locally controlled institutional base.<sup>6</sup>

**Above:** Location of case-study neighborhoods in the Chicago metropolitan area. Drawings by author.

*Centers and Edges.* To formulate design principles that extend beyond unit mix and neighborhood facilities and services, it is possible to draw from the field of ecology. For forty years urbanists in the tradition of Jane Jacobs have argued that human habitats may follow key requirements of ecological structure.<sup>7</sup> For example, ecologists are interested in the characteristics of core areas (needed for interior species to thrive), and edge structure (width and composition).<sup>8</sup> It is conceivable that neighborhood structural qualities like centers and edges (cores and edges in ecological parlance) also have particular effects and importance in socially diverse places.

*Connectivity.* One of the most basic principles of landscape ecology is the need to avoid the isolation of habitat, caused by fragmentation, splitting or attrition. Similarly, planners may emphasize the need for connectedness, applying the principle to streets, facilities, and the lives of residents, and building a case for physical planning based on promoting connection.<sup>9</sup> They may focus on providing alternative routes and access points through improved street networks, or they may draw attention to the size and shape of blocks that determine corresponding patterns of movement.

Enhancing connectivity may be as simple as delineating safe places to cross streets, calming traffic on busy thoroughfares, or instituting better pedestrian pathways. It is generally agreed that large-scale blocks, cul-de-sacs, and dendritic (branching, hierarchical) street systems are less likely to provide high levels of connectivity.

### The SmartCode and Diversity

By examining the SmartCode in detail it is possible to see how a transect-based planning strategy can address each of these four basic design principles. Indeed, I believe the SmartCode goes much further in its support of social diversity than conventional zoning, or even other form-based or mixed-use zoning codes.

First, and most obviously, the transect allows for a diversity of housing types in each urban zone. Thus, the SmartCode specifically calls for a “range of housing types and price levels” within zones, intended to “accommodate diverse ages and incomes.”

Such an unambiguous statement about diversity is unique, even radical, for a zoning ordinance. However, it is not completely open ended. Because each zone is designed to cohere to a given level of urban intensity, there are limits set on the range of housing types. For example, the Urban Center and Urban Core zones do not allow single-family houses, and the Sub-Urban zone does

not permit apartment buildings, or even duplexes. On the other hand, there is also proaction: the SmartCode specifies percentages of housing types required within each zone. In the General Urban zone, for example, a minimum residential housing mix of three types is required.

With regard to the second principle, the SmartCode encourages development of neighborhood facilities and services through an inclusive notion of permitted building functions in the three urban zones (T4, T5, T6), and to a more limited degree in the T3 Sub-Urban zone. The urban zones allow a variety of lodging, office, retail, and civic uses. In the Sub-Urban zone, mixed use is more controlled, but does permit corner grocery stores, small-scale lodging (such as a bed-and-breakfast inn), live-work units, and childcare centers. In addition, the “complete neighborhood,” a fundamental unit of the SmartCode, is defined on the basis of whether it includes a “mixed-use center.”

Third, the SmartCode is embedded with language about centers and edges. This is unusual among land-development codes, which are generally a-spatial—i.e., they do not explicitly consider the meaning and implication of spatial arrangements because they do not consider geographic dimensions that can’t be categorized into discrete zones.

In comparison, the SmartCode’s nested system of sectors, community types, neighborhoods, and pedestrian-sheds are conceptually centered and bounded. Community types are composed of pedestrian-sheds, which are themselves defined by the distance between a center and an edge. Urban places are planned and zoned according to types that are “clustered,” “centered,” or otherwise based on a centric neighborhood model, which has “a recognizable edge” that can “blend...without buffer.” The SmartCode is further careful to conceptualize edges as integrative and synthetic, and the diagram of individual zones shows how one may bleed into another.

Finally, the SmartCode includes some very specific language about the importance of street connectivity. SmartCode policy is “that interconnected networks of thoroughfares should be designed to disperse and reduce the length of automobile trips,” and that “all thoroughfares shall terminate at other thoroughfares.” There are specifications about the size of blocks (kept small) and limitations on cul-de-sacs. Most importantly, connectivity has stature, reflected in the statement that in urban zones “the continuity of the urbanized areas shall take precedence over the natural environmental conditions....”

## Application

Is it possible to envision the SmartCode being applied to strengthen areas that are already socially diverse? How, specifically, would the SmartCode help, given the design criteria discussed above?

In Chicago, as in many U.S. cities, social diversity is most characteristic of older, inner-ring suburbs. It is further recognized that many of these areas are currently in need of renewed planning attention.<sup>10</sup> Areas of three municipalities just outside of Chicago—Berwyn, Summit, and Calumet Park—can be used to demonstrate how an application of transect-based planning by means of the SmartCode may reinforce existing social diversity.

Some sense of the three target areas can be gleaned from 2000 Census statistics. The selected portion of Summit has a nearly even mix of owner-occupied and renter-occupied housing; it has income levels that are almost evenly distributed from high to low; and it is 21 percent non-Hispanic white, 22 percent non-Hispanic black, and 55 percent Hispanic. There is also a wide, evenly distributed range of population by age.

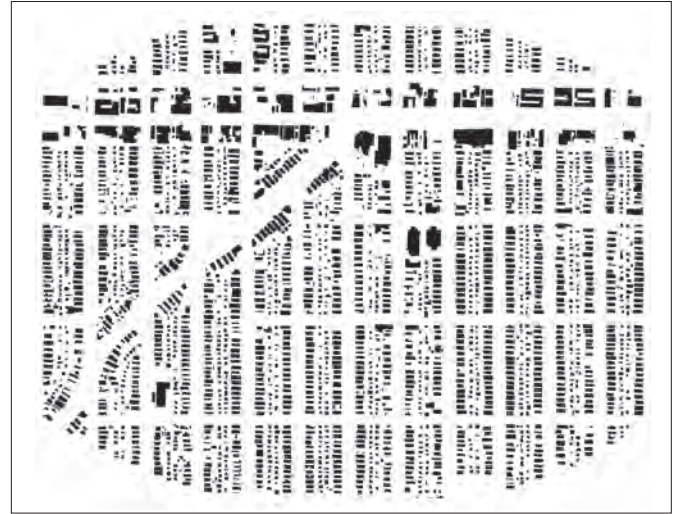
The selected areas of Calumet Park and Berwyn have a similar demographic profile in terms of income levels, age groups, and mix of owner- vs. renter-occupied housing. Only their racial composition is different. The selected area of Calumet Park is 10 percent non-Hispanic white, 58 percent non-Hispanic black, and 26 percent Hispanic. The area of Berwyn is 42 percent Hispanic, and 52 percent non-Hispanic white.

An examination of the morphology of these areas reveals the following design weaknesses, for which the SmartCode could be used to effect a range of design remedies.

*The Summit Neighborhood.* The figure-ground map of the selected section of Summit shows a predominantly residential area bounded by a strong western edge, which runs along a major highway. A commercial core of significantly larger structures runs perpendicular to the edge through the center of the selected area.

Two design strategies may be appropriate here. First, to create a viable center, the entire neighborhood would benefit from a stronger, more focused central place. Its residential areas are served by the commercial “main street,” but the street is lined mostly by industrial and vacant buildings, and lacks strong spatial definition. The current urban fabric is disjointed, lacks central focus, and offers little support for social and economic interconnection.

To help integrate the industrial buildings along the main axis, a core area could be designated at the intersection of the neighborhood’s major north-south axis. The



main axis also requires a better defined streetscape, one that integrates the commercial and industrial functions on either side of the street. Ultimately, these changes could also help dampen the negative influence of the highway to the west and better integrate the surrounding residential fabric.

*The Berwyn Neighborhood.* The figure-ground drawing of the selected section of Berwyn shows a strong grid pattern and a dominant central commercial street. However, one potential weakness in this neighborhood is the homogeneity of its pattern of land uses. Nonresidential uses are linearly distributed along the main arterial, but the rest of the neighborhood is almost solidly residential. The lack of land use mix may mean that too much pressure is being put on the commercial corridor. The strong external linkage of this corridor may mean it is extremely busy and that its neighborhood-level functionality is being compromised.

One strategy for this area would be to form alternative nodes to absorb new growth, interspersed throughout the relatively homogenous residential fabric. The blocks surrounding selected nodes could then be encouraged to gradually and organically develop a more mixed functionality—not necessarily retail, but neighborhood-serving. Locations would be chosen that could successfully anchor the mix, such as around existing institutional buildings.

*The Calumet Park Neighborhood.* The figure-ground map shows that this section of Calumet Park has a mix of residential types, but that it is poorly integrated. In particular, large apartment buildings in superblocs, focused internally, sit next to much smaller units on traditional blocks. While these disparate residential types

may be “integrated” in the sense of being contained within one neighborhood, their relation to each other appears awkward and tenuous.

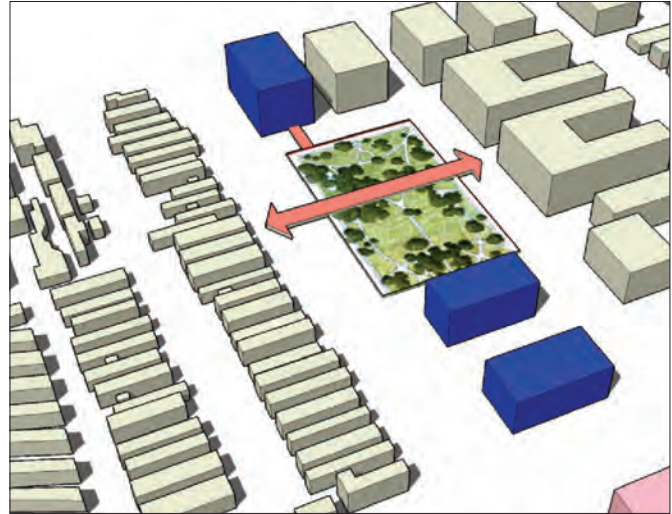
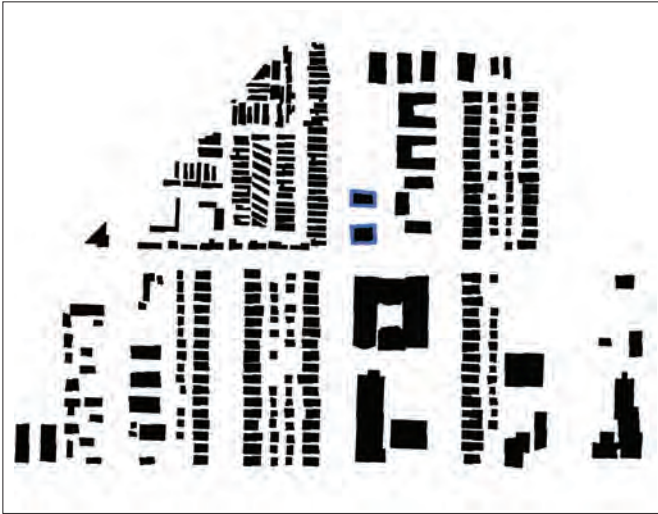
There is a need to create better connectivity in this neighborhood, particularly between its variegated housing forms. Connections could be improved by paying more attention to undefined vacant land that seems to have emerged between housing types. These transitional areas appear neglected and do not effectively create a physical or perceptual linkage between the diverse housing types around them. Such areas should be developed into useful public space, with adjacent lots simultaneously improved to generate diverse activities. The creation of public open space can be a good way to link diverse housing types, but it should be recognized that development of active, adjoining uses is also important for supporting the linkage.

### Can the SmartCode Support Diversity?

The design needs of these three socially diverse areas can be summed up as follows: strengthen centers and address strong edges (Summit); allow more mixed-use and improve the distribution of neighborhood services and facilities (Berwyn); and better connect and integrate a mix of housing types (Calumet Park).

Unlike more conventional zoning codes, the SmartCode has the potential to address these diversity-building requirements directly. For example, in Summit, the

Above: The Summit neighborhood (left). The Berwyn neighborhood (right).  
Drawing by author.



strengthening of centers and edges will require attention to the design of blocks, buildings and thoroughfares. The SmartCode contains language about physical definition of space, the importance of public and private frontages, and the need to maintain network connectivity. The inclusion of these design requirements in a land-regulation code can be interpreted as a strategy for nurturing a physical infrastructure that will support social diversity.

To foster mixed use in selected nodes in Berwyn—to make this mix work in a nondisruptive way—there is a need to establish a well-positioned (that is, widely accessible) network of nonresidential uses, paying particular attention to the design of immediately surrounding areas. SmartCode provisions for maintaining appropriate setbacks, building type, and height could be useful for this purpose. The introduction of nonresidential buildings in a residential fabric can appear abrupt and nonconforming, and may be resisted in the absence of such design control.

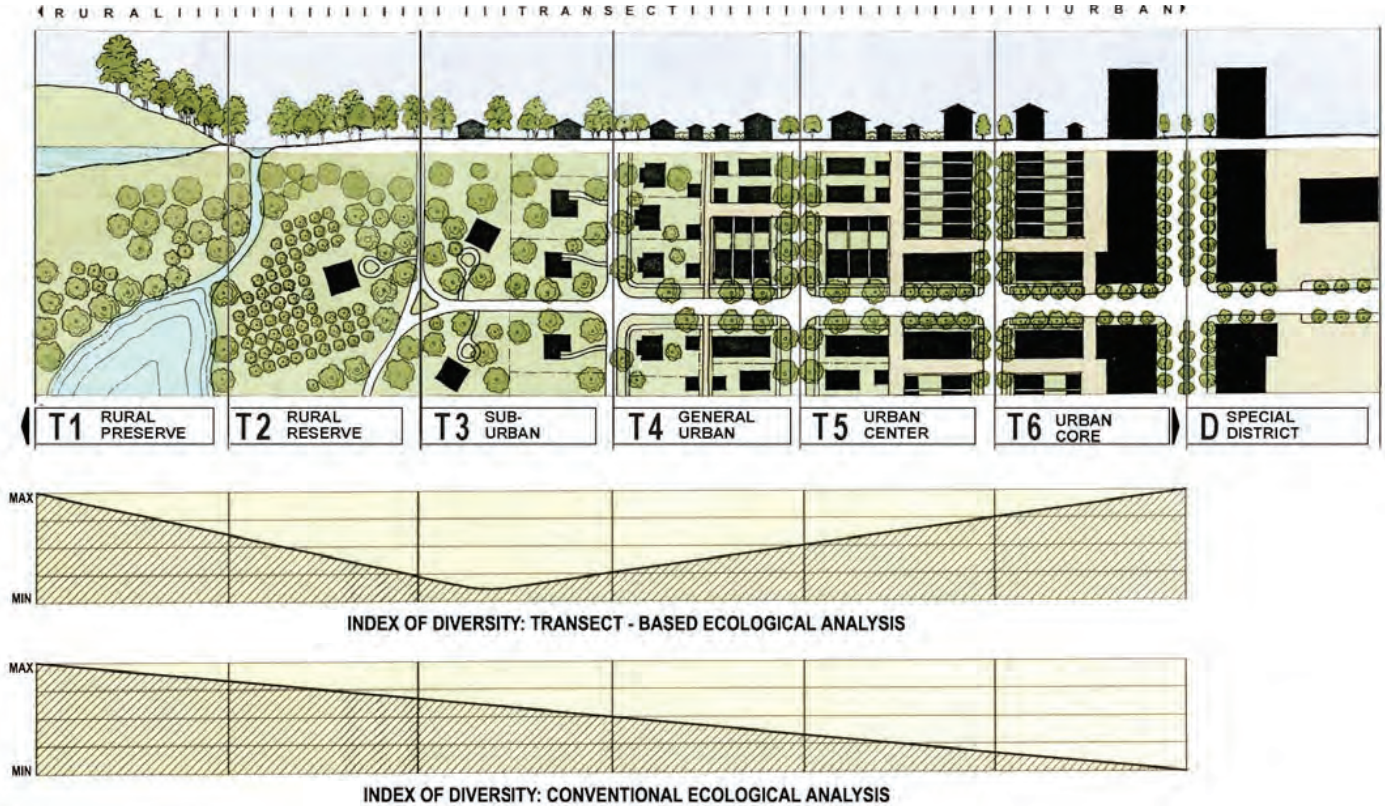
Finally, in the Calumet Park neighborhood the SmartCode has several provisions that could help increase connectivity and the integration of different housing types. As new housing units are added, vacant lots revitalized, and new connections made, the SmartCode will help make the integration of diverse urban elements something to embrace.

For a century, regulation of the built environment has consciously supported separation—of people and of land use. Sustaining social diversity requires just the opposite—a built environment that mixes, connects and integrates. By encouraging an alternative social ecology based on the rural-urban transect, the SmartCode seems to offer

a viable way to redress planning’s conventional focus on separation, providing instead a viable context for diversity.

Of course, the SmartCode has not yet been tested. But I find it hopeful that, in addition to its explicit coding for mixed housing types, mixed uses, and connectivity across a range of urban intensities, the SmartCode is explicitly based on an integrative theory. The transect emulates a natural, biologically inspired notion of complexity that avoids segregated order. This theoretical grounding will be necessary to counter the rootedness of social separation. Translated to a system of land regulation through the SmartCode, the transect may be just the kind of driving force needed to establish a regulatory system that supports social diversity in explicit ways.

Above: The Calumet Park neighborhood (left). Mixed-use buildings could anchor and activate the area between diverse housing types (right). Drawings by author.



Notes

1. Michael Sorkin, "Introduction: Traffic in Democracy," in Joan Copjec and Michael Sorkin, eds., *Giving Ground: The Politics of Proximity* (London: Verso, 1999), p. 2.
2. Stubben's essay on this may be found in Benjamin Marsh's *An Introduction to City Planning* (New York: Arno Press, 1974, Reprint of 1909 ed., published by the author).
3. Eldridge Lovelace, *Harland Bartholomew: His Contributions to American Urban Planning* (Urbana, IL: University of Illinois Press, 1992), p. 37.
4. Thomas Adams, *Outline of Town and City Planning: A Review of Past Efforts and Modern Aims* (New York: Russell Sage Foundation, 1935), p. 302.
5. See Peter Marcuse, "Enclaves Yes, Ghettos, No: Segregation and the State," paper presented at the International Seminar on Segregation in the City, July 26-28, 2001, at the Lincoln Institute of Land Policy.
6. Philip Nyden, Michael Maly, and John Lukehart, "The Emergence of Stable Racially and Ethnically Diverse Urban Communities: A Case Study of Nine U.S. Cities," *Housing Policy Debate*, Vol. 8, No. 2, pp. 491-533; and Dina R. Rose, "Social Disorganization and Parochial Control: Religious Institutions and Their Communities," *Sociological Forum* 15 (2000), pp. 339-58.
7. For example, see Lewis Mumford, *The Urban Prospect* (New York: Harcourt Brace Jovanovich, 1968), p. 71; Mike Greenberg, *The Poetics of Cities: Designing Neighborhoods that Work* (Columbus: Ohio State University Press, 1995); C.

- Alexander, H. Neis, A. Anninou, and I. King, *A New Theory of Urban Design* (New York: Oxford University Press, 1987), p. 95.
8. Wenche E. Dramstad, James D. Olson, and Richard T.T. Forman, *Landscape Ecology Principles in Landscape Architecture and Land-Use Planning* (Cambridge, MA: Harvard University and Island Press, 1996).
9. See, for example, Philip Langdon, *A Better Place to Live: Reshaping the American Suburb* (Amherst: University of Massachusetts Press, 1994). See also Lewis Mumford, "Planning for the Phases of Life," in *The Urban Prospect* (New York: Harcourt Brace Jovanovich, 1949), p. 38.
10. See, for example, Myron Orfield, *American Metropolitcs: The New Suburban Reality* (Washington, D.C.: Brookings Institution Press, 2002).

**Above:** Transect-based diversity analysis combines both natural and social factors. While natural diversity is at its highest in T1, social diversity is usually highest in T6. The lowest combined level is in the T3 zone. Conventional ecological analysis fails to account for increases in social diversity. However, the relative compactness, walkability, and transit friendliness of the T6 zone allow a social diversity that makes it a better exchange for natural lands on a regional basis. Drawing courtesy of Duany Plater-Zyberk & Company.