SMARTCODE JUSTICE

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Abstract

City planners have a spotty history when it comes to social diversity. Early calls for socially mixed communities quickly gave way to zoning that enabled residential segregation. New tools like the SmartCode ostensibly seek to rectify this problem. This paper analyzes whether the SmartCode actually helps to foster social diversity. Does the SmartCode's intent to deposit a "collection of qualities appropriate to a zone" protect against the further breeding of social homogeneity? To answer these questions, I first explain how social diversity can be supported by planning and design of the physical environment more generally. I then consider whether the SmartCode has the necessary structure and content to generate those physical conditions. I conclude by examining three diverse neighborhoods in Chicago as case studies.

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Over the past century, one of the biggest disappointments of American city planning has been its complicit role in fostering the widespread physical separation of people according to social criteria. This was the unfortunate consequence of planning's various regulatory tools, notably zoning, which became mechanisms committed to separation of all kinds. As Michael Sorkin characterized it, city planning was devoted to creating an "armature" of "conflict avoidance".[1] What planners know now is that whatever legitimate needs there may have been for rationalizing urban space in these terms, it is now necessary to reverse this history in any way possible.

City planning did not start out this way. Paradoxically, the 20th century began with demands that city reformers do something about the "monotony" of the slums, and the earliest proposals – those of Ebenezer Howard, for example – called for settlements that were internally focused but diverse. There was a clear emphasis on the interconnectedness of urban life at all levels. Even zoning was at first a mechanism of diversity, as planners like Josef Stubben proposed zones that would integrate multiple uses in a coherent way. But somewhere in the 1920s, egged on by a public eager to protect property values, planners made a wrong turn. As they struggled for recognition and legitimacy, planners began to think of their fledging profession in terms of single components – parks, streets, highways. One early planner, Harland Bartholomew,

thought of planning as "a divide and conquer system"[2] whereby the city could be separated into components for easier analysis, plan-making, and, hopefully, manipulation. Being scientific and efficient meant simplifying, and simplifying meant differentiating.

Unfortunately this meant separation by race and class, too. By the time of the landmark 1926 zoning case, Village of Euclid vs. Ambler Realty Co., the segregationist orientation of leading planners was firmly established. The U.S. Supreme Court legalized it. 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." This decision was lauded by planners. By 1935, Thomas Adams, a leading planner of the day, was proposing 4 classes of residential zones in the hope of reducing the "injury" that one type could cause on another.[3]

The upshot is that zoning in this country has effectuated profound social inequities. The question I address here is whether we can now use land regulation to effectuate the opposite: a socially just development pattern. As new regulatory approaches gain prominence, do we know with certainty that they will constitute a reversal of various forms of segregation?

To explore this, I focus on the SmartCode, which represents a particularly strong departure from conventional coding schemes. Can the SmartCode be put to the test and made to answer whether it is perpetuating human divisions or helping to foster social diversity? Does the SmartCode's intent to deposit a "collection of qualities appropriate to a zone" protect against the further breeding of social homogeneity? As has been made painfully obvious to us since the advent of zoning earlier in this century, land use regulation is unlikely to be neutral on this question.

To answer these questions, I first explain how social diversity can be supported by planning and design of the physical environment more generally. I then consider whether the transect-based system known as the SmartCode has the necessary structure and content to generate those physical conditions. I conclude by examining three diverse neighborhoods in Chicago as case studies.

Planning for Diversity

What would planning that supports diversity be like? Surely the relationship is complex - just as social and economic divisions are both fortified and contradicted by space, so too with social and economic diversity.[4] But here I consider four specific ways in which design of the physical environment is likely to support social diversity. I define social diversity as a mix of people of varying socioeconomic status living together in one neighborhood. Socioeconomic status is generally defined on the basis of race, class, and stage in the life cycle.

Housing Mix

Housing unit mix is the most basic approach to diversity-building. It was an explicit goal of 19th century social reformers, and new town development in the form of Garden Cities was intended to mix people of various backgrounds by integrating different types of housing units within the same block. Design strategies focused on disguising housing type, for example, by making apartment dwellings look like large single-family homes. Now, mixing housing unit types is a matter of reversing the rules by which social segregation has been achieved: allowing multi-family 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 are strategies that work in reverse: infiltrating higher-income housing in lower-income neighborhoods.

Neighborhood Functionality

Second, social diversity requires the support of a functionally diverse neighborhood. Not only do neighborhood facilities serve the needs of residents and therefore promote it more generally, but neighborhood-level services are 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 the phenomenon of "stable

diverse" neighborhoods have found that economic diversity and a neighborhood's institutional base are common denominators of diverse neighborhoods.[5]

The most obvious planning implication is the need to permit diverse uses within the same neighborhood, and this in turn requires some design control to ensure neighborhood compatibility. Specific design ideas were advanced by Jane Jacobs, who argued that diversity of uses required a "fine grain" in the urban texture, by having small lot sizes and small block sizes. Small blocks are more likely to encourage a diversity of building types and uses. In addition, diversity requires paying particular attention to public space. Such spaces are a way of bringing people together, providing the context in which diversity can be celebrated and expressed.

Centers and Edges

To formulate design principles that extend beyond unit mix and neighborhood functionality, it may be possible to draw from the field of ecology. Jane Jacobs was one of the first to recognize that diverse human habitats are like diverse biological habitats. Ecologists know that the health and abundance of species is directly related to plant and animal habitat location, the size and number of patches, and the condition of discrete habitats like woodlands or ponds. They argue that a core area of interior habitat is needed for interior species to thrive, and fragmentation of this interior habitat, even if replaced with multiple, smaller interior habitats, causes a disproportionately greater loss of interior habitat.[6]

These requirements of ecological structure may not be dissimilar from human habitats. For example, it is conceivable that neighborhood structural qualities like centers and edges (cores and edges in ecological parlance) have particular effects for socially diverse places. Planners have consistently maintained that it is beneficial to have a neighborhood center or "central nucleus", either through "pulling together on a more adequate site plan institutions that had been set down more or less at random" or by "abetting the deliberate recentralization of institutions". Others argue that local streets should converge on the center, while maintaining a continuous urban fabric. Christopher Alexander advocated the formation of a "field of centers" as essential to the maintenance of the urban whole.[7]

Edges may also have a role to play in the maintenance of diverse neighborhoods. Landscape ecologists are particularly interested in edge structure (width and composition), the shape of boundaries (whether straight or not, for example), and what these characteristics mean for maintaining edge vs. interior species. Ecologists consider the function of an edge, whether it is acting as a filter that buffers surrounding influences, and whether the edge is of sufficient width to protect interior habitat from disturbances. What this means in human terms is that it is important to consider the effect of edges on the diverse neighborhood – their structure and form, whether they can be seen as beneficial vs. detrimental, and whether they should be better integrated with adjoining locations or strengthened as protective barriers.

Connectivity

One of the most basic principles of landscape ecology is the need to avoid the isolation of habitat, which may be caused by fragmentation, splitting, or attrition. Ecologists consider the effect of gaps on the movement of species, and whether "stepping stones" can be used as corridors (depending on their spatial arrangement). Planners often emphasize the need for connectedness, applying the principle to streets, facilities, and individuals, and building a case for physical planning based on promoting these connections. There is often an explicit call to foster "the maximum interplay of capacities and functions", as Lewis Mumford described the function of cities.[8] All of this connectedness is believed to be important for maintaining, if not promoting, social diversity.

Connectivity can occur at multiple scales. Urban planners assert the need to establish connectedness between the neighborhood and the city, but there are also important linkages to be made within the neighborhood itself. Planners may focus on the alternative routes and access points that can be created by promoting street networks. They may draw attention to the size and shape of blocks, which determine corresponding patterns of movement. Enhancing connectivity can also be as simple as delineating safe places to cross streets, calming traffic down on busy streets, or instituting better pedestrian pathways. It is generally agreed that large scale blocks, cul-de-sacs and dendritic (tree-like) street systems are less likely to provide high connectivity.

The SmartCode and Diversity

Does transect-based planning via the SmartCode employ these basic diversity-supporting design principles? The question is appropriate for two reasons. First, as a rhetorical matter, transect theory is predicated on the notion that the built environment should seek to establish human diversity wherever possible. As a practical matter, it is legitimate to ask whether this is reflected in the specific requirements of transect-based regulations like the SmartCode. Second, transect-based planning emulates a natural, biologically-inspired notion of complexity. Basing urban order on ecological complexity avoids the problematic notion of planning based on deterministic order, but it also requires that a transect-based system deal appropriately with the topic of social diversity.

There will have to be some reckoning with the fact that the natural tendency of humans in an affluent Western capitalist democracy is to use the tools of land development to solidify social separation. The transect may have been observable as "natural law" before the mid-20th century, but if the mechanisms that drove those naturally occurring arrangements are gone, a more concerted effort will be required.[9] This means that the transect, as a theory of organization, will need to address diversity explicitly. Translated to a system of land regulation in the SmartCode, it will have to ensure that the components of urbanism finding their place along a rural-to-urban gradient also work to support social diversity in explicit ways.

So how does the transect incorporate the physical design criteria outlined above: housing mix, land use mix, centers and edges and connectivity? I find that the SmartCode does very well in the specification of these diversity-supporting design elements. It goes much further in its explicit support of social diversity infrastructure than conventional zoning, or even form-based and mixed use zoning codes. It does so in the following ways.

First, and most obviously, the transect allows for a diversity of housing unit types in each urban zone. The "range of housing types and price levels" within zones are intended to "accommodate diverse ages and incomes." Such an unambiguous statement about diversity is unique, even radical, for a zoning ordinance. But 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: percentages of housing types required within each zone are specified. In the General Urban Zone, for example, a minimum residential housing mix of three types is required.

Second, neighborhood functionality – mixed use – is encouraged by an inclusive notion of permitted building functions in the three urban zones (T4, T5, T6) and, to a more limited degree, the T3 sub-urban zone. The urban zones allow a variety of lodging, office, retail, and civic uses. In the Sub-Urban zone (T3), mixed use is more controlled, but it does permit corner grocery stores, small scale lodging (such as a bed and breakfast inn), live-work units, and child care 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 for 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. 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 to be 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 Code is careful to conceptualize edges as integrative and synthetic, even for the individual zones. The diagram of T zones shows one zone bleeding into another.

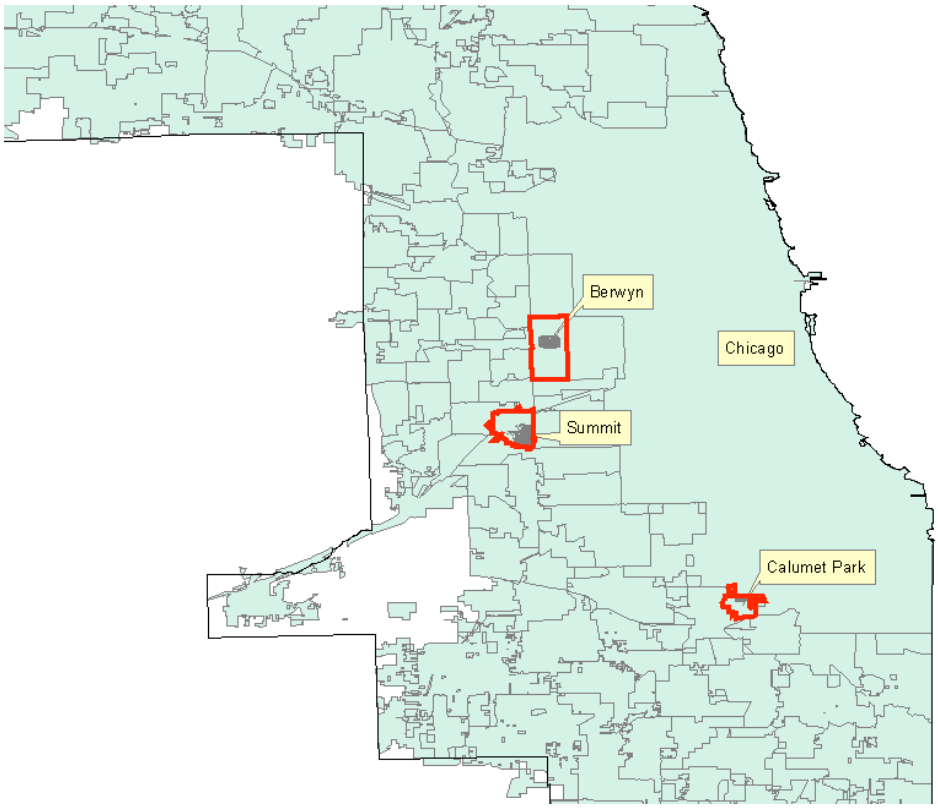
Finally, the SmartCode includes some very specific language about the importance of street connectivity. SmartCode policy is "that interconnected networks of thoroughfares should be designed to disperse and reduce the length of automobile trips", and that "all thoroughfares shall terminate at other thoroughfares". 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

How can we envision the SmartCode being applied to strengthen areas that are already socially diverse? How would the SmartCode help, given the design criteria discussed above that are considered particularly useful for supporting diversity?

I look at three municipalities just outside of Chicago that are known to be socially diverse: Berwyn, Summit and Calumet Park. In Chicago, as in many other cities, social diversity rests in the older, inner-ring suburbs. It is widely recognized that these areas are in particular need of attention.[10]

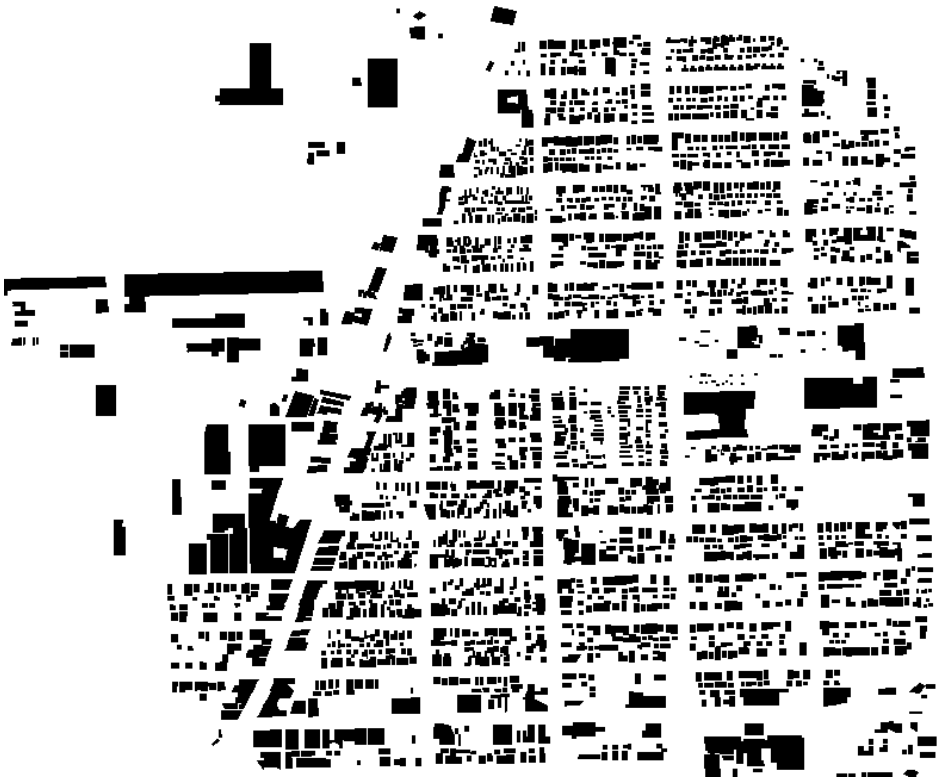


The three selected areas are socially diverse, based on 2000 census statistics. The selected portion of Summit has a nearly even mix of owner-occupied and renter-occupied housing, has income levels that are almost evenly distributed from high to low, and is

21% Non-Hispanic white, 22% Non-Hispanic black, and 55% Hispanic. There is also a wide, evenly distributed range of age groups. The selected areas of Calumet Park and Berwyn have a similar demographic profile in terms of its diversity of income levels and age groups, and a relatively even mix of owner vs. renter-occupied housing, but with different racial composition. Calumet Park is 10% Non-Hispanic white, 58% Non-Hispanic black, and 26% Hispanic. The selected area of Berwyn is 42% Hispanic, and 52% Non-Hispanic white.

An examination of the morphology of these areas reveals the following design weaknesses and corresponding strategies.

The Summit Neighborhood. The selected section of Summit is an example of a socially diverse place dominated by strong edges and lacking a viable center. The figure ground map shows a strong western edge, which runs along a major highway. A commercial core of significantly larger structures runs perpendicular to the edge, and through the center of the selected area.



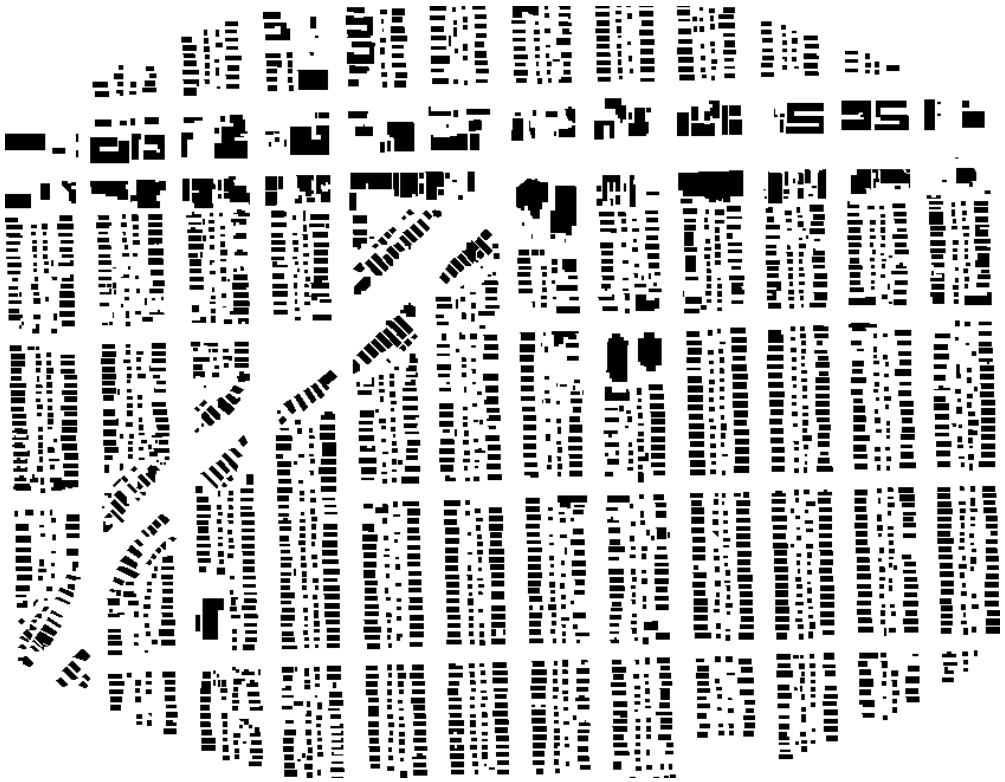
The Summit Neighborhood

Two design strategies may be appropriate for this area. First, the area may benefit from a stronger, more focused central place. The residential areas are served by the commercial "main street" running through the neighborhood, but the street is composed mostly of industrial buildings, and lacks strong spatial definition. For example, there are a number of vacant properties, and the rather large industrial buildings fronting the street give the sense that the urban fabric is disjointed. Most importantly, this affects its ability to function as a neighborhood center – a central location servicing neighborhood residents - which may be an important aspect of supporting socially diverse places. A stronger center may be important as a "seam" holding social diversity together.

To help integrate the industrial buildings along the main axis, a core area could be designated, at the intersection of the major north-south axis in the area. The idea would be to transform this industrial strip from a wasteland and a physical dividing line into a "seam" that integrates and connects. The edge requires a better defined streetscape, one that integrates the commercial and industrial functions on either side of the street. Ultimately, the edge could serve a more useful function: "filtering" to dampen the negative influence of the highway to the west, but at the same time, integrating the residential fabric.

The Berwyn Neighborhood. The selected section of Berwyn, just outside the western boundary of the city of Chicago, is an example of a socially diverse place occupying a fairly traditional neighborhood structure. There is a strong grid pattern and a dominant commercial street, shown in the figure ground map of the area.

One potential weakness in the physical form of this neighborhood is its land use homogeneity. Non-residential uses are linearly distributed along the main arterial, but the rest of the neighborhood is almost solidly residential. As argued earlier, social diversity requires neighborhood functionality – a variety of commercial and institutional uses. In addition to the vital importance of meeting basic servicing needs so that the neighborhood is well functioning, facilities provide a sense of collective "ownership".



The Berwyn Neighborhood

The lack of land use mix may mean that too much pressure is being put on the central commercial corridor to absorb important non-residential uses. The commercial area is viable, and both internal and external connectedness is not a strong issue here. But its strong external linkage (the commercial corridor links to downtown Chicago) means that not only is it extremely busy, but its neighborhood-level functionality is compromised. Taking on these broader functions can be disruptive for the neighborhood, and create a kind of separation harmful to the maintenance of social diversity.

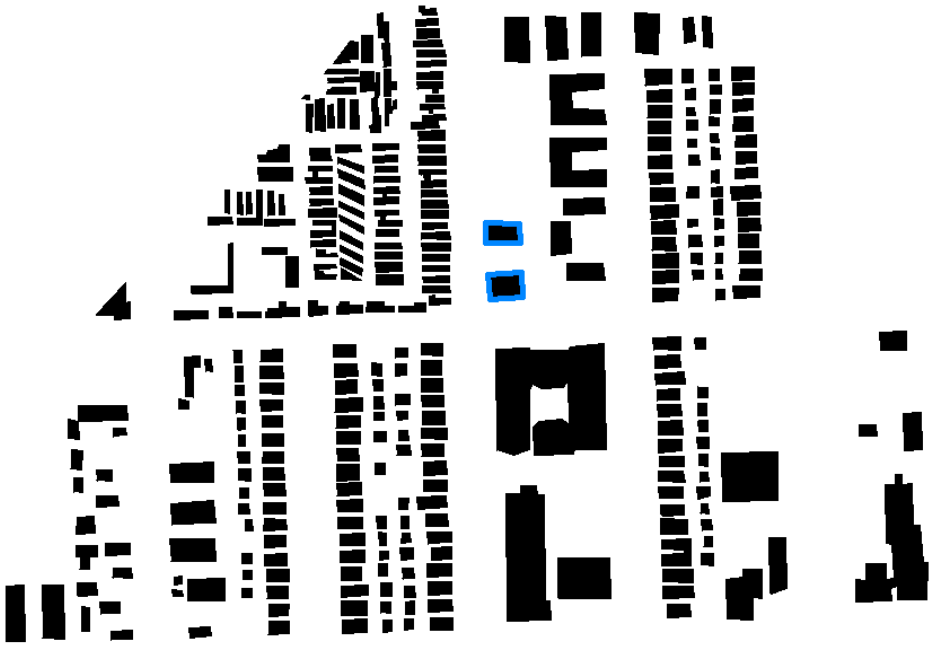
One intervention for this area would be to form alternative nodes that absorb new growth, interspersed throughout the relatively homogenous residential fabric. These locations would be targeted as mixed use areas. The blocks surrounding selected nodes would be encouraged to gradually and organically develop a more mixed functionality.

To successfully create new nodes that more evenly distribute community functions, locations could be chosen that can successfully anchor the mix. One strategy would be to locate new mixed use areas around existing institutional buildings (there are a few), or

vacant land that could be developed. The focus of the design intervention, then, would be the successful development of these new mixed use nodes.

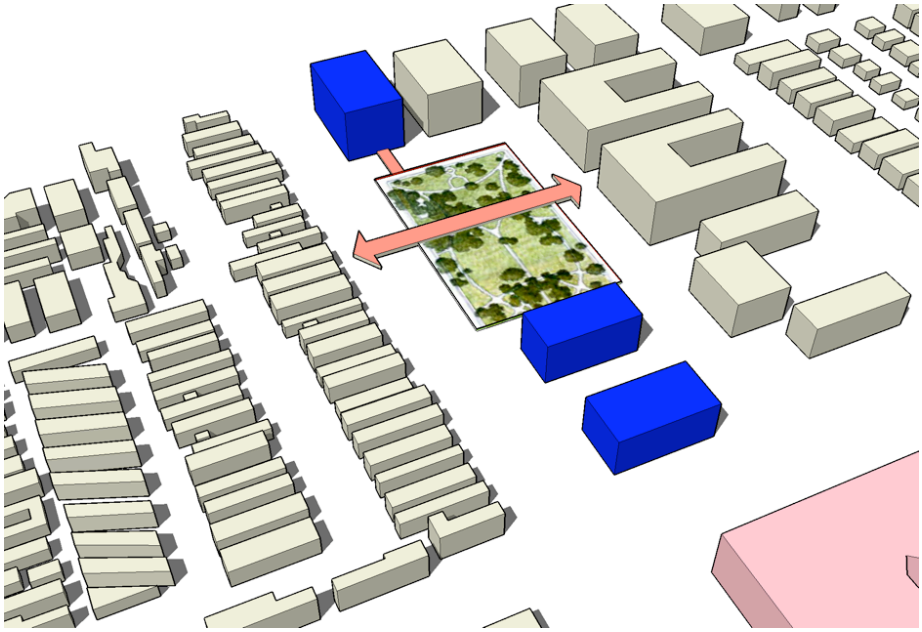
The Calumet Park Neighborhood. The diverse section of Calumet Park has a clear mix of residential types, but the mix is poorly integrated. Large apartment buildings in superblocks, focused internally, sit next to much smaller units on traditional blocks, as shown on the figure ground. While these disparate residential types are "integrated" in the sense of being contained within one neighborhood, their immediate integration appears awkward and tenuous.

There is a need to create better connectivity in this neighborhood, particularly between 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 serve the purpose of effectively creating a physical or perceptual linkage between the diverse housing types surrounding them. Development could provide an important visual and functional form of connection.



The Calumet Park neighborhood

There is the possibility of turning vacant areas between housing types into parks. In that case, adjacent lots would need to be simultaneously developed to generate diverse activities. Jane Jacobs argued that mixed uses were the basis of successful urban parks – that what mattered for the viability of parks was the vitality of the land uses around them. In the case of maintaining social diversity, the development of public open space can be a good way to link diverse housing types, but it should be recognized that maintaining a variety of adjoining uses is equally important for supporting the linkage.



Mixed use buildings could anchor and activate the area between diverse housing types

Conclusion

The design needs of these three socially diverse areas can be summed up as follows: the need to strengthen centers and address strong edges (Summmit); the need to allow more mixed-use and increase neighborhood functionality (Berwyn); and the need for better connectivity and better integration of a mix of housing types (Calumet Park).

I think the SmartCode has the potential to address these diversity-building requirements directly. In Summit, the strengthening of centers and edges will require

attention to the design of blocks, buildings and thoroughfares in ways that conventional codes do not come close to. The SmartCode has embedded language about physical definition of space, about the importance of public and private frontages, about the need to maintain network connectivity.

To foster mixed use in selected nodes in Berwyn – to make this mix work in a non-disruptive way – there is a need to establish a well-positioned (that is, widely accessible) network of non-residential uses, paying particular attention to the design aspects of the areas immediately surrounding these sites. The SmartCode could be used for this purpose, maintaining appropriate setbacks, building type and height, and encouraging a mix of uses at an appropriate level. This is especially important since the introduction of non-residential buildings in a residential fabric can appear abrupt and non-conforming, and will be resisted in the absence of design control.

Finally, the Calumet Park neighborhood suffers from poor housing unit integration and weak connectivity in some places. The SmartCode could go some way toward increasing connectivity and integrating housing types because of the attention it pays to these issues. As a mix of units are added, as vacant lots are revitalized, as connections are made, the SmartCode focuses on making the integration of diverse urban elements something to embrace.

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