How can we Actually Encourage People to Walk? A Response to Typical Misapplications of New Urbanism

> Patrick Braga Cornell University

CNU 22: Buffalo, NY 5 June 2014

How can we Actually Encourage People to Walk? A Response to Typical Misapplications of New Urbanism

Abstract

Occasionally, developments claiming to be "New Urbanist" have only reinforced suburban transportation behaviors rather than legitimately addressing automobile-centered urbanism. However, authentic urban spaces – those in which people can comfortably make the transportation choice not to drive a car – can be built if developers and local governments follow specific urban design principles. In response to this need, this paper proposes a new framework for analyzing the American transportation landscape and rectifying instances of misapplied New Urbanism. Distinctions between urban and suburban transportation behaviors are defined through an historical landscape analysis, and as a case study, this paper proposes urban design interventions to a project in Osprey, Florida.

Introduction

To what extent can New Urbanism design neighborhoods in which people will make the deliberate choice to walk to commercial areas? What makes some projects successfully encourage pedestrianism while others fail? To respond to these questions, this paper proposes a theoretical framework that grounds itself on the following two hypotheses:

- 1. People will make the choice to walk if the physical design and land use of commercial areas follow historical patterns of walkable communities. Previous scholarship in urban theory has also focused on the dialectic between mobility and physical design, including Borchert's (1967) model of urban evolution; Boarnet and Crane's (2001) work, *Travel by Design*; and Moudon's (1997) definition of landscape morphology.
- 2. "Urban" and "suburban" do not necessarily refer to economic-geographical hierarchies, but to distinct patterns of physical planning and transportation choices. An understanding of the underlying differences between urban and suburban transportation landscapes should be able to guide design decisions that will influence people's transportation choices.

Before proceeding, it is important to note that, while some of these observations are not exactly new, enough developers are misinterpreting them to necessitate a new framework for analyzing New Urbanist proposals and rectifying misapplied instances of them.

Definitions

Paths of movement are a defining factor for distinguishing urban and suburban physical design and syntaxes at different scales (Figure 1). First, the immediate scale presents itself before a stationary individual and can be perceived with limited mobility. Secondly, the local scale (the entire neighborhood site) is normally perceived as an "urban fabric" that can be covered on foot. Hull *et al.* (1994) argued that the urban fabric consists of symbols that allow individuals to establish a relationship with a place; the local scale fulfills this semiotic requisite, as that is where a pedestrian can develop an intuitive sense of their surrounding's physical organization. Third, the spatial composition generated at a larger spatial scale, more easily experienced in a car, can be called the mesoscale, an aggregate of immediate- and local-scale design decisions. Superseding these are different metropolitan and regional scales that have more implications for transit-oriented development than pedestrianism by itself.

At these scales, it is already known that successful walkable environments (that is, places where the choice to walk is feasible) are pedestrian-friendly: buildings tend to be close to the sidewalk and land parcels are organized in an interconnected block-and-street system legible to a pedestrian. The mesoscale conglomeration of local-scale and immediate-scale places should encourage people to walk, bike, or take transit from their homes to commercial areas. On the other hand, suburban environments are composed of largely self-segregating spaces where paths of movement are focused on vehicular needs, and some spaces cannot necessarily be clearly distinguishable as "streets" or simply "parking-lot paths."

Next, walkability and pedestrian-friendliness must be differentiated. Walkability occurs when diverse commercial activity exists within walking distance from residences. Preferably, this diversity should include offices, restaurants, and daily-needs establishments such as grocery stores, pharmacies, or hardware stores. A pedestrian-friendly environment makes walking safe, but does not necessarily encourage walking to commercial areas. Many suburban subdivisions have pleasant walking and bicycling trails and even sidewalks along streets, making these safe places to walk, but they are not walkable – that is, accessing commercial areas without a car is inconvenient. A brilliantly crafted example of an urban place that is both walkable and pedestrian-friendly is Montréal's Little Portugal, where interconnected streets give prominence to the pedestrian realm while giving cyclists physically separated tracks, extending commercial establishments into the neighborhood, and maintaining quiet residential streets.

The importance of interconnectivity to fostering walkable environments cannot be underestimated; Cervero and Duncan (2003) explained that large blocks and dead-end intersections are not conducive to pedestrian activity, while Jane Jacobs (1961) noted that small blocks are easier for pedestrians to negotiate. Since commercial areas are already within a walking and biking distance of most people in the United States (Pucher and Dijkstra 2003), American cities have the ability to support safe bicycling and walking through land use and transportation infrastructure, and should create humane transportation access into pedestrian-friendly commercial areas through block-based, interconnected physical design.

This analysis must also acknowledge market forces as a result of cheap motorized transportation, and we must accept that land use and transportation policy will have an impact on walkability of American cities. In the Netherlands, for instance, the ideological basis for compact urbanism rests on the premise of building cities that take up little space, are comfortable for travel for modes other than the private automobile, consume less energy, preserve the economic vitality of existing centers, and ensure exurban open space (Dieleman *et al.* 1997, 605-606) – all of which are goals similar to those espoused by the Charter of the New Urbanism as well as transect theory. These principles come in response to intensification of both urban and rural land use (van der Valk 2002, 207; Hidding and Teunissen 2002, 198), which makes sense given the heightened scarcity of land in the country. These policies thus explain the disparate designs of transit-oriented and bicycle-friendly Houten, a suburb of Utrecht built starting in 1966, compared to contemporaries in mid-century Florida exemplified by the sprawling single-family plats built by the General Development Corporation, such as North Port or Port St. Lucie, designed acutely around street hierarchies and subdivisions.

The most important land use policy challenge to tackle, then, is in fact a transportation one: the low economic price of driving. Research has reiterated that driving in the United States is too cheap (for instance, in King et al. 2007 or Manville and Shoup 2010), and even if monetarily priced parking and driving are not politically feasible, physical design incentives through narrower roads, shared spaces, and block-based designs offer opportunities to increase the economic marginal price of driving.

The Historical Transportation Landscape as a Justification and its Impact on New Urbanism

Many New Urbanist developments create pedestrian-friendly urban environments at the immediate scale but give it up at the scale of the whole neighborhood, generating but a weak feeling of urbanism in the interior of the site. As a result, developments such as West Park Village in Tampa, FL or Westwood Common near Detroit, MI will not successfully counteract larger forces of suburban transportation behavior because they either do not connect to surrounding streets or do not have safe

pedestrian access points at their edges. As a result, driving remains the main tool for mobility even for discretionary and non-commute trips, which constitute the majority of trips generated (Manville 2013).

Nonetheless, Relph (1987) argued that landscapes come into existence within as a result of processes that shape physical space. From this, since New Urbanism actively tries to create walkable communities, we may assume that recreating the physical and economic environment shaped by the process of pedestrianism should induce that process itself. Bel Geddes once noted, according to Ellis (2005), that regardless of whether a city was organized in a gridiron or not, interconnected street-and-block design is frustrating for motorized transport. Thus, an environment that is physically amenable to walking and not for driving should induce walking to some degree by increasing the economic price of driving.

Historical Precedents for Urban and Suburban Physical Design

The historical precedent in American cities has been to use the city block as the basic organizational structure of urban physical planning. At the immediate and local scales, then, a space that attempts to be urban must have a block structure perceptible to the pedestrian. Despite the prevalence of gridirons in the American urban tradition (Reps 1965; Mirin 2013), blocks do not need to be orthogonal to be understood as distinct design elements, as is the case in downtown Sarasota, FL or the older parts of Boston, MA. Furthermore, the general historical relationship between buildings and their sites in urban areas has been for buildings to be located within reasonable proximity of the street (Talen 1999). This reaffirms the pedestrian as the main actor in pre-motorized American urbanism. Thus, these historical precedents justify promoting block-and-street design whose geometries pedestrians can understand.

Levy (1999) contended that the general trend in urban morphology has been from a "closed fabric" to "an open fragmented peri-urban fabric" (79). The late-nineteenth- and early- twentiethcentury focus on bringing nature into the city (Young 1994) and designing neighborhoods similarly to parks set the precedent for design with little to no reliance on the urban block, making path-oriented design the primary driver of Levy's noted fragmentation and a distinction between urban and suburban morphology. Planned neighborhoods like South Park, IL; Riverside, IL; Llewellyn Park, NJ; McClellan Park, Sarasota, FL; Cornell Heights, Ithaca, NY; and Morningside, Atlanta, GA were justified in the same Transcedentalist view (Mirin 2013) that inspired both landscape theorist Andrew Downing and developers who sought create a sense of uplift through integration with nature. The design of the streets themselves, such as in Llewellyn Park, are in fact quite similar to contemporary designs of park paths, illustrating the strong influence of park design on neighborhood design. This is a logical approach both in terms of the pastoral landscape so many designers wanted to achieve and the fact that gardens and parks were largely based on paths rather than blocks as the principal design unit. Coupled with Ebenezer Howard's garden-city visions, street morphologies eventually became more definitively hierarchical and automobile-oriented as a result of the impulse toward path-based urban design.

However, the same mindset that built typologies unique to postwar American suburbia (Jackson in LeGates and Stout 2011) has also contributed to contradictory design in New Urbanist developments. For instance, inverted strip malls with plentiful off-street surface parking, such as St. John's Town Center in Jacksonville, FL or Stapleton in Denver, CO are less likely to generate pedestrian trips from existing adjacent neighborhoods, for whose residents the economic price of driving will be low enough that they may choose not to walk or bike. Using the language of Gibbs (2012) for urban retail typologies (60-67), I propose that "Double Reverse L Centers," "Lifestyle or Main Street Centers," and open-air "Dumbell Centers" are among the most common typologies to find misapplications of New Urbanism, through which developers and city officials seem to assume that these designs will generate pedestrianism by their own right. Although the experience at the immediate

scale in these may be similar to that of urban spaces, the site designs indicate but an inside-out suburban strip mall with excessive parking – once seen as an economically rational response for inner cities to compete with suburbs (Duany 2013) – and weak pedestrian connectivity at the edges. Indeed, simply inverting a strip mall is not enough to increase the number of non-motorized trips meaningfully.

In urban spaces, even the parking lot should be subservient to a block structure. In a conversation with Elizabeth Plater-Zyberk (2013), one of the founders of the Congress for the New Urbanism and a designer of several such communities, I asked about the abundance of parking in The Kentlands, MD and what kind of role this had on generating motorized trips. She explained that, given the block structure, the space can transition over time into encouraging more and more walking by catering to the type of transportation landscape the town hopes to generate.

In short, historical American physical design and its influence on contemporary city-building can inform how contemporary design choices should affect transportation choices.

A Framework for Analysis

Building off these historical precedents, the following set of questions can diagnose a New Urbanist design for its walkability. If all components are met with a "yes," then the design of the neighborhood will successfully implement block-based design and interconnected pedestrian networks. Depending on the nature of commercial activity in the development, it can be expected to create a truly walkable environment.

Immediate Scale:

- **Do buildings front streets and sidewalks directly?** New Urbanism encourages lively streets, and residential and commercial buildings alike must front the pedestrian realm. A misapplication of this can be found in the dense yet inward-turning multi-family developments on Harbor Island, Tampa, FL that do not provide direct access to the sidewalk. When density is inward-turning, it will not be as strong in discouraging car use.
- Is parking provided in blocks or as parts of plazas? In downtown Tampa, FL or downtown Cleveland, OH, parking lots occur in blocks because they take the place of where buildings once stood, but this situation, as Kentlands, MD replicated, is better for future infill development than having to create new blocks. Centennial Park, Venice, FL is a downtown block transformed into a dual-purpose park and parking lot with very clearly defined pedestrian and vehicular realms, allowing it to serve both a storage function as well as providing public open space.

Local (Neighborhood Site) Scale:

- Are streets distinct from parking-lot paths? Allowing what feels like a street to become a parking-lot path is a pitfall evident in the designs for Bay Street Village, Osprey, FL and St. Johns Town Center, Jacksonville, FL, where parking lots are not organized into blocks.
- Can a pedestrian expectably build a mental map according to streets and blocks? Pedestrian malls do not violate this principle: pedestrian blocks can be independent of vehicular blocks, but not the other way around (which would create modernist superblocks with potentially disorienting and unpopulated pedestrian environments), as are the case of Lincoln Street in Miami Beach, FL; the Commons in Ithaca, NY; Church Street Marketplace in Burlington, VT; or Market Square, Knoxville, TN. From an economic standpoint, however, these must take caution to have a dense enough residential and professional population both to support the businesses as well as to maintain a desirable degree of "urban friction" in the space (Patrose 2014).

Mesoscale (Contextual Scale):

• Does the street-block system connect to its surroundings in both the vehicular and pedestrian realms? Does the site have porous edges for pedestrians and vehicles alike?

Traditional downtowns tend to be accessible through both their expansion of grids into surrounding residential areas as well as by providing crosswalks to support pedestrians in crossing large roadways. This is the case in the small cities of Ithaca, NY; Ann Arbor, MI; or Boulder, CO.

While this type of infrastructure tends to be outside of the developer's sphere of power, it is absolutely instrumental in generating genuine urban spaces. The untraversable transportation networks of the aforementioned developments of West Park Village and Westwood Common, for instance, both essentially create mesoscale cul-de-sacs.

Harbor Island and Ybor City, Tampa, FL as well as Stapleton, CO all suffer from lack of crosswalks to help pedestrians cross four- and five-lane roads into commercial areas. Although laws exist providing pedestrian right-of-way even at intersections without marked crosswalks (such as Oregon Revised Statute 801.220 and New York Vehicle & Traffic Law 27.1151), these situations may be uncomfortable enough for some pedestrians, particularly children and the elderly, to decline crossing the road unless necessary.

Urban/Metropolitan Scale:

• Do diverse forms of transportation networks such as transit lines and bicycle trails connect the development to other commercial nodes? Although some aspects of this question are again beyond the developer's reach, city officials and developers should keep these goals in mind when making decisions on new physical development.

Case Study: Creating a Truly Walkable Community in Osprey, FL

Osprey is a coastal census-designated place in Sarasota County, FL with a population of just over 6,000, and it sits on US Route 41 and on the shores of Little Sarasota Bay. In 1998, Sarasota County Commissioners approved a Revitalization Plan that stipulated a "village center" comprised of existing residential neighborhoods and a new commercial core. Bay Street Village & Towncenter, a self-described "Highly Anticipated Mixed-Use Community," broke ground in 2006, but development temporarily halted during the Great Recession. In terms of physical design and transportation decisions, Bay Street Village is similar to other unsuccessful attempts at New Urbanism in that, at buildout, its primarily boutique retail and inadequate connections to its surroundings would be unlikely to encourage existing Osprey residents to walk. In Figure 2, I point out and try to address the following problems:

At the immediate scale within the development, the environment is suggestively urban: buildings are close to the street and pedestrians can walk comfortably. However, the design of the pathways inside the complex suffer the same lack of design identity of paths as in standard postwar residential development projects across the country: some paths change identities from street to parking-lot path or to drive-through, or have no definite identity as a street or otherwise. As a result, these hints of suburban design make the site feel more suited to cars than pedestrians at points.

Yet the biggest pitfall of the plan for Bay Street Village is that does not provide the transportation infrastructure to support pedestrianism in its surroundings. There are no sidewalks to the stores, schools, parks, and churches next door; no crosswalks from the existing neighborhood just to the north, which is set apart by a two-way street with a raised concrete median; and without a clear notion of the distinction between streets and parking-lot path, the plan becomes an inversion of a strip mall

rather than establishing a legible street-and-block system. To serve as a "town center" to which Osprey residents can walk, Bay Street Village must have porous edges: implementing comfortable pedestrian access to existing residential, commercial, and recreational areas while reaffirming the historical block design found elsewhere in Osprey.

Nonetheless, perhaps a positive trait of the development is that it is along an important longitudinal bus route in Sarasota County. Unfortunately, the demographics of people more likely to use transit are an unlikely match for the higher-end retail uses once planned for the project.

Thus, the example of Osprey demonstrates how the four proposed scales of spatial analysis and their associated characteristics for urban environments can identify connectivity issues and propose adequate physical changes (in this case, improved pedestrian access, creation of a legible block system, and diversifying targeted commercial uses) that should help respond to other projects that demonstrate similar misapplications of New Urbanism.

Conclusion

New Urbanist neighborhoods that do not encourage walking often provide too much parking, have path-based rather than block-based design, and do not create an interconnected transportation network at the mesoscale and beyond. By addressing these specific issues at four spatial scales in comparison to historical and contemporary precedent, communities should be able to encourage pedestrianism more successfully. By generating a tangible and accessible urban fabric, these developments will be one step closer to functioning as authentically urban spaces.

(Figures and Works Cited on following pages.)

Figures

Figure 1: Four Scales for Spatial Analysis

Four scales of urban design corresponding to most comfortable transportation choices (overlapping):



<u>Figure 2: Site Plan of and Issues with Bay Street Village</u> (Site plan from BayStreetVillage.com over a Google Maps image.)



Works Cited

"Bay Street Village & Towncenter." Last modified 2006. Accessed 2013. < http://www.baystreetvillage.com>

Boarnet, Marlon Gary, and Randall Crane. *Travel by Design: The Influence of Urban Form on Travel*. Oxford: Oxford University Press, 2001.

Borchert, John R. 1967. "American Metropolitan Evolution." Geographical Review, 57: 3.

- Cervero R. and M. Duncan. 2003. "Walking, Bicycling, and Urban Landscapes: Evidence from the San Francisco Bay Area". *American Journal of Public Health*. 93, no. 9: 1478-83.
- Duany, Andrés. 2013. "Lean Urbanism for Local Government." Lecture. < http://vimeo.com/75794881>
- Dieleman, Frans M., Martin J. Dijst, and Tejo Spit. 1999. "Planning the Compact City: The Randstad Holland Experience." *European Planning Studies*. 7, no. 5: 605-621.
- Ellis, Cliff. 2005. "Lewis Mumford and Norman Bel Geddes: the Highway, the City and the Future". *Planning Perspectives*. 20, no. 1: 51-68.
- Gibbs, Robert J. *Principles of Urban Retail Planning and Development*. Hoboken, N.J.: John Wiley & Sons, 2012.
- Hidding, Marjan C., and André T.J. Teunissen. 2002. "Beyond Fragmentation: New Concepts for Urban–rural Development." *Landscape and Urban Planning*. 58, no. 2-4: 297-308.
- Hull, R. Bruce, Mark Lam, and Gabriela Vigo. 1994. "Place Identity: Symbols of Self in the Urban Fabric". *Landscape and Urban Planning*. 28, no. 2-3: 109-120.
- Jacobs, Jane. The Death and Life of Great American Cities. New York: Random House, 1961.
- Jackson, Kenneth T. "The Drive-In Culture of Contemporary America." in Richard T. LeGates and Frederic Stout, *The City Reader*. London: Routledge, 2011. 55-64.
- King, David, Michael Manville, and Donald Shoup. 2007. "For Whom The Road Tolls: The Politics of Congestion Pricing." ACCESS Magazine, 1(31), 2 - 7. UC Berkeley: University of California Transportation Center.
- Levy, A. 1999. "Urban Morphology and the Problem of the Modern Urban Fabric: Some Questions for Research". Urban Morphology. 3, no. 2: 79-85.
- Manville, Michael. "CRP 3852:Traffic Congestion." Lectures, Class from Cornell University, Spring 2013.
- Manville, Michael and Donald Shoup. 2010. "Parking requirements as a barrier to housing development: regulation and reform in Los Angeles." University of California Transportation Center. UC Berkeley: University of California Transportation Center.
- Mirin, Leonard. "ARCH 3819: Special Topics in History of Architecture and Urbanism History of American Landscape Architecture." Lectures, Class from Cornell University, Spring 2013.
- Moudon, Anne V. 1997. "Urban morphology as an emerging interdisciplinary field." Urban Morphology 1, 3-10.
- New York State. "Vehicle & Traffic Law." Accessed May 2014.
- Oregon State Legislature. "Oregon Revised Statutes." Last updated 2014. Accessed May 2014.

Patrose, Patraap. 14 March 2014. Conversation with Cornell University Urban and Regional Studies majors. Boston Redevelopment Authority, Boston, MA.

- Plater-Zyberk, Elizabeth. Conversation. January 2013.
- Pucher, J. and L. Dijkstra. 2003. "Promoting Safe Walking and Cycling to Improve Public Health: Lessons from The Netherlands and Germany". *American Journal of Public Health*. 93, no. 9: 1509-16.
- Relph, E. C. The Modern Urban Landscape. Baltimore: Johns Hopkins University Press, 1987.
- Reps, John William. *The Making of Urban America: A History of City Planning in the United States*. Princeton, N.J.: Princeton University Press, 1965.
- Sarasota County. "Ordinance 98-01-SP: Osprey Revitalization Plan." 1998.
- Talen, Emily. 1999. "Sense of Community and Neighbourhood Form: An Assessment of the Social Doctrine of New Urbanism". Urban Studies. 36, no. 8: 1361-1379.
- van der Valk, Arnold. 2002. "Dutch Planning Experience." Journal of Planning Literature. 17, no. 1: 85-168.